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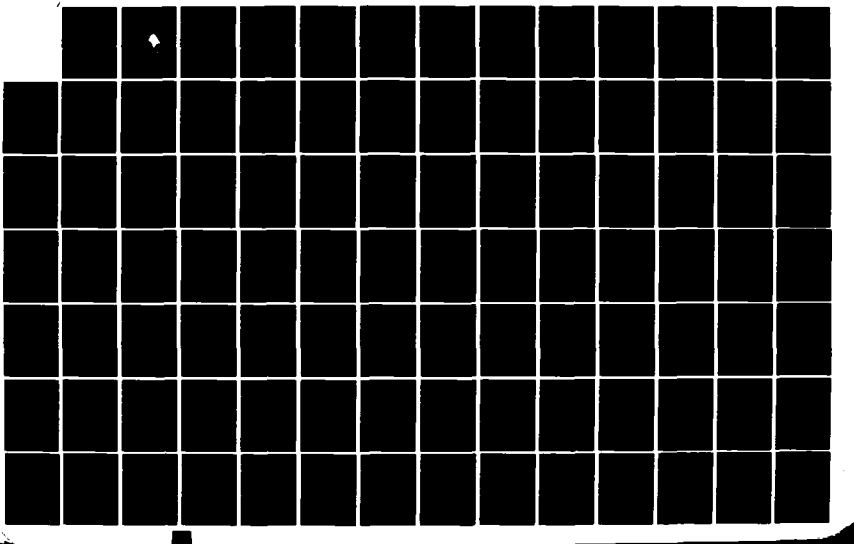
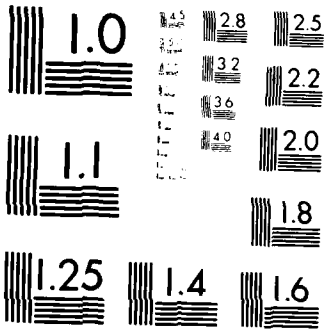
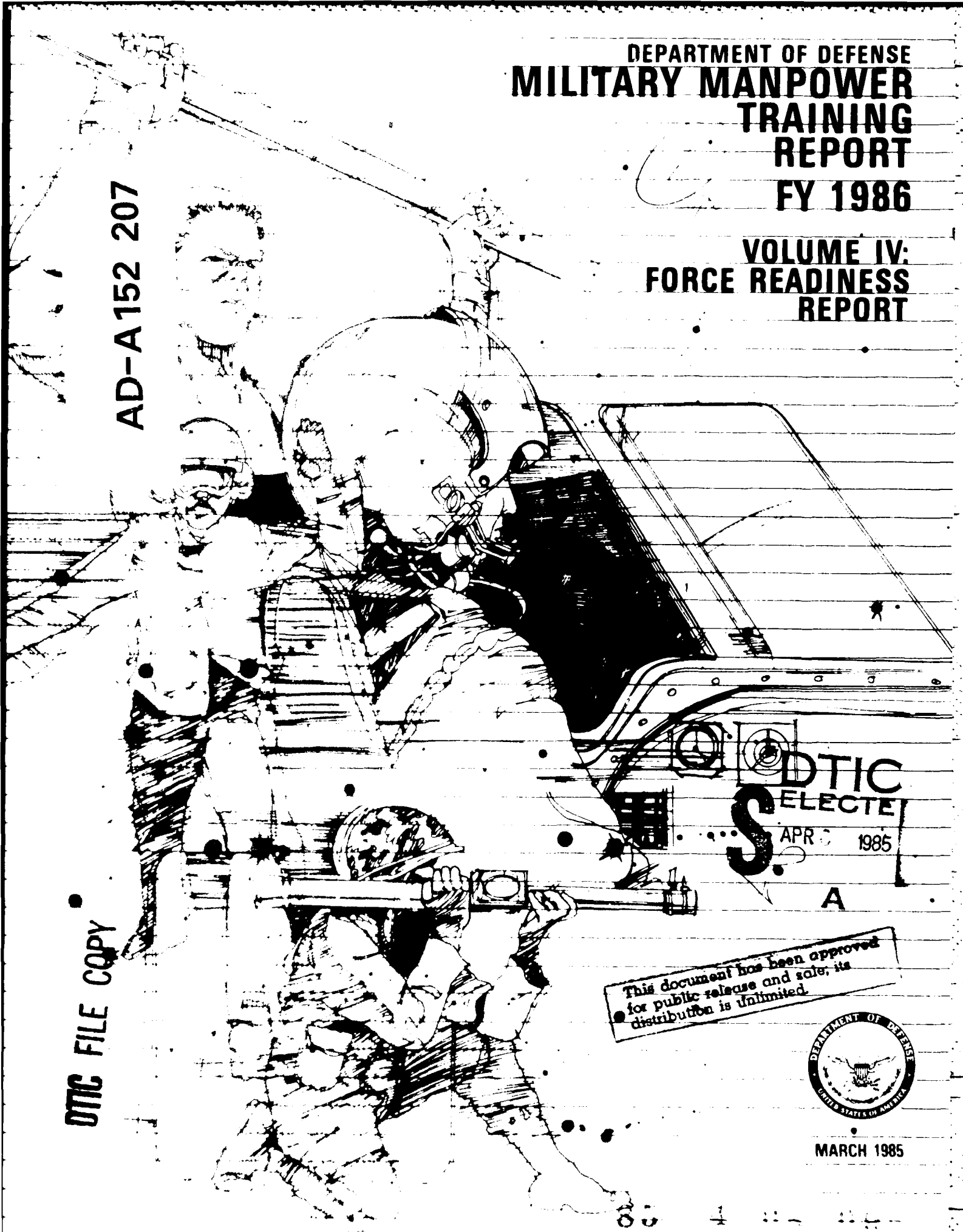




DEPARTMENT OF DEFENSE

MILITARY MANPOWER TRAINING REPORT FY 1986

VOLUME IV: FORCE READINESS REPORT



MARCH 1985

DEPARTMENT OF DEFENSE

MILITARY MANPOWER TRAINING REPORT

FOR FY 1986

VOLUME IV: FORCE READINESS REPORT

Prepared by

Office of the Assistant Secretary of Defense
(Manpower, Installations and Logistics)
Department of the Army
Department of the Navy
Department of the Air Force

MARCH 1985

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EXECUTIVE SUMMARY

The Military Manpower Training Report of the Secretary of Defense is submitted to the Congress in accordance with 10 U.S.C. 138(d)(2), which states:

> The Secretary of Defense shall submit to Congress a written report, not later than March 1 of each fiscal year, recommending the average student load for each category of training for each component of the armed forces for the next three fiscal years, and shall include in that report justification for, and explanation of, the average student loads recommended.

This report specifically supports the Department of Defense request for authorization of average military student training loads for each component, active and reserve, of each Service for Fiscal Year 1986. Requested training loads are shown in Table 1.

TABLE 1.--Requested Training Loads, FY 1986 and FY 1987

	FY 1986	FY 1987
Active Components		
Army	79,686	79,428
Navy	71,018	70,080
Marine Corps	20,766	21,562
Air Force	43,389	45,905
Subtotal	214,859	216,975
Reserve Components		
Army National Guard	18,886	22,409
Army Reserve	16,985	17,876
Naval Reserve	3,355	3,566
Marine Corps Reserve	3,790	3,607
Air National Guard	2,751	2,720
Air Force Reserve	2,118	2,092
Subtotal	47,885	52,270
TOTALS	262,744	269,245

The requested loads are consistent with the President's Budget for FY 1986 and the Department of Defense request for authorization of military manpower strengths, active and reserve, as submitted in February 1985.

Definitions and Explanation of Training Loads

This report discusses the training and education of individuals within the Department of Defense, as opposed to the training within operational mission units. Individual training and education, for purposes of this report, is divided into six categories:

- Recruit Training, given to enlisted entrants to the Services who have not had previous military service.
- One-Station Unit Training, an Army program which combines Recruit Training and training in certain skills into a single course.
- Officer Acquisition Training, which leads to a commission in one of the Services.
- Specialized Skill Training, needed to prepare military personnel for specific jobs in the Military Services.
- Flight Training, primarily for prospective pilots and navigators before they receive an initial operational assignment.
- Professional Development Education, relating to the advanced professional duties of military personnel or to advanced academic disciplines to meet Service requirements.

"Training loads" are the average number of students and trainees participating in formal individual training and education courses during the fiscal year. For a full fiscal year, training loads are the equivalent of student/trainee manyears for these participants, including both those in temporary duty and permanent change of station status.

The requirement for training in a baseline force is derived from the need to replace losses in each skill required in the military force structure. Losses, through separations, promotions and other causes, are projected at various points in the future and compared to the projected inventory of trained personnel. The deficit between the requirement in each skill and the inventory becomes a demand for an output of trained personnel. A phased input of students to the training establishment is then scheduled so that trained personnel, in each skill and skill level, are available at the proper time to replace the losses in those skills. The resulting workload placed on the training establishment is the basis of the training loads addressed in this report.

The training load for each component is the measure of the amount of training required for the members of that component, although some of the training will be done by other Services, in DoD schools, or in some cases by institutions outside the Department of Defense. The training of members of the Reserve Components included in the report is the formal school training provided by the active training establishment to individual members of the Reserve Components while they are on active duty for training; this is primarily training provided to non-prior service personnel entering the Reserve Components.

An Overview of Training Loads

During FY 1986 and FY 1987, total requested DoD training loads will range between approximately 262,744 and 269,245. About 82 percent of these annual loads is composed of training for members of the active forces; the remaining 18 percent of these loads is training for members of the Reserve Components, while on active duty, conducted by the active training establishment.

Table 2 displays the percentage of total active force loads and the percentage of total Reserve Component loads attributable to each of the major categories of training in FY 1985.

TABLE 2.--Percent Distribution of Training Loads, FY 1986

Training Category	Active Forces	Reserve Components
Recruit Training	21%	28%
One-Station Unit Training	6%	18%
Officer Acquisition Training	9%	1%
Specialized Skill Training	57%	52%
Flight Training	3%	1%
Professional Development Education	5%	1%
Total	100%	100%

It will be noted that the preponderant categories of training, in terms of training loads, are Recruit Training and Specialized Skill Training, both of which, along with One-Station Unit Training, are strongly influenced by the number of enlisted non-prior service accessions to the force. Other types of training -- all of Officer Acquisition Training, for example -- are also driven by the number of new accessions to the force. Table 3 divides the requested training loads for FY 1986 into two parts: training that is primarily accession-related, and is conducted for the purpose of turning a civilian into a qualified servicemember with a usable military skill; and other training, which, for the most part, is conducted for the purpose of preparing members in later stages of their military careers for more demanding duties.

TABLE 3.--Accession-Related Training and Training Loads, FY 1986
(Thousands)

	Active Forces	Reserve Components	Total Active & Reserve
Accession-Related Loads			
Recruit	44.7	13.3	58.0
One-Station Unit Training	12.3	8.6	20.9
Officer Acquisition	18.9	0.3	19.2
Initial Skill (Officer & Enlisted) a/	71.4	21.0	92.4
Undergraduate Flight	5.6	0.6	6.2
Subtotal	152.9	43.8	196.7
Other Loads			
Other Specialized Skill	50.7	3.7	54.4
Other Flight	0.9	0.1	1.0
Professional Development	10.3	0.3	10.6
Subtotal	61.9	4.1	66.1
Total Load	214.9	47.9	262.7
Accession-Related Loads as a Percentage of Total Loads	71%	91%	75%

Note: Numbers may not add to due to rounding.
a/ In some cases, includes some training for prior-service personnel or personnel who receive the training at a later stage in their career.

As Table 3 shows, training primarily related to new accessions amounts to about 71 percent of all training programmed for the active forces in FY 1986; only about 29 percent is for subsequent training. The comparable proportions for the Reserve Components are about 91 and 9 percent. The concentration on accession-related training demonstrates the priority the Services place on training intended to produce new servicemembers who are motivated, amenable to discipline, and capable of productive service as members of military organizations.

Table 4 shows the trend in training loads.

TABLE 4.--Active and Reserve Training Load Trends by Service, FY 1973 - 86
(Thousands)

	FY 73	FY 82	FY 83	FY 84	FY 85	FY 86	Percent Change FY 73-86	Percent Change FY 84-86
Active Forces								
Army	109	76	71	70	78	80	-27%	+13%
Navy	77	64	63	64	67	71	- 8%	+11%
Marine Corps	30	19	19	21	20	21	-31%	- 2%
Air Force	59	44	44	41	44	43	-26%	+ 6%
Total Active	274	203	197	196	209	215	-22%	+10%
Reserve Components	25	38	33	32	43	48	+92%	+49%
Total DoD	299	241	230	228	252	263	-12%	+15%

Note: Calculations are affected by rounding.

Table 5 compares training loads by the major categories of training.

TABLE 5.--Active and Reserve Training Load Trends by Training Category, FY 1973 - 86
(Thousands)

	FY 73	FY 82	FY 83	FY 84	FY 85	FY 86	Percent Change FY 73-86	Percent Change FY84-86
Recruit	94	53	52	52	56	58	-38%	+11%
Officer Acquisition	20	18	19	19	19	19	- 4%	+ 3%
Specialized Skill	157	129	118	119	137	147	- 6%	+23%
Flight	9	7	8	7	7	7	-20%	+ 3%
Professional Development	19	9	9	10	11	1	-44%	+ 5%
One-Station Unit Training	-	25	24	21	23	21	-	± 0%
Total	299	241	230	228	252	263	-12%	+15%

Note: Calculations are affected by rounding.

The training loads reflect shifts in resources and training capacities to complement force plans. Total training loads will increase from 228,000 in FY 1984 to 263,000 in FY 1986. The growth in Specialized Skill Training accounts for much of the increase. Recruit training loads also show a significant increase for this period.

Funding for Individual Training

Funds required to support the training in the training load request for FY 1986 total approximately $19.1 billion. This amount includes pay and allowances for the students undergoing training, pay and allowances of military and civilian personnel in support of training, operations and maintenance costs, and training-related procurement and construction funded in FY 1986. Table 6 displays total training costs for each Service.

TABLE 6.--Funding of Individual Training by Service, FY 1986
($ Millions)

Army	Navy	Marine Corps	Air Force	DoD
$8,338.8	$5,095.8	$1,264.0	$4,439.1	$19,137.6

The same funding is shown in Table 7 for each of the major categories of training and for related support and travel.

TABLE 7.--Funding of Individual Training by Training Category, FY 1986
($ Millions)

Recruit Training	$1,410.7
Army One-Station Unit Training	443.3
Officer Acquisition Training	498.8
Specialized Skill Training	4,931.5
Flight Training	2,471.7
Professional Development Education	787.7
Medical Training	676.6
BOS and Direct Training Support	4,659.5
Management Headquarters	156.7
PCS Cost for Training	652.3
TDY and Reserve Component Pay and Allowances	2,448.8
Total	$19,137.6

Note: Numbers may not add due to rounding.

Funding estimates are based on data contained in DoD's Five Year Defense Program (FYDP). This report is consistent with resource estimates in the President's budget, the justification material submitted to the Congress, the Five Year Defense Program and other internal DoD management reports.

Manpower for Individual Training

Individual training requires manpower to conduct and support instruction, manage military schools and training centers, maintain training bases and provide support to students, military staff members and their dependents. Chapter IX of this report provides an analysis of military and civilian manpower in individual training. Manpower in support of individual training for FY 1986, by the general functions it performs, is shown in the following table.

TABLE 8.--DoD Manpower in Support of Individual Training, FY 1986
(End Strength, Thousands)

	Military	Civilian	Total
Training and Direct Training Support a/	103.8	24.1	127.9
Base Operating Support	29.4	41.1	70.5
Major Training Headquarters	1.8	1.8	3.6
Total	135.0	67.0	202.0

a/ Includes instructors, instructional support, school/training center administration, student supervision.

Table 9 shows that the total amount of manpower in support of individual training is 5 percent higher in FY 1986 then it was in FY 1982. Base Operating Support has been reduced in prior years and continues a gradual decline between FY 1982 and FY 1986, down 5 percent. Manpower at major training headquarters remains unchanged. Overall, the total manpower declines show reductions in manpower for Base Operating Support which partially offset the increases in manpower for Training and Direct Training Support.

TABLE 9.--Trends, Manpower in Support of Training, FY 1977-86
(Combined Military and Civilian End Strengths, Thousands)

				Percent Change	
	FY 77	FY 82	FY 86	FY 77-86	FY 82-86
Training and Direct Training Support	130	115	128	- 2%	+11%
Base Operating Suppo t	81	74	70	-13%	- 5%
Major Training Headquarters	4	4	4	-	-
Total	215	193	202	- 6%	+ 5%

Training workloads -- that is, all students trained including DoD military students, foreign students and students from other U.S. agencies -- have increased as Table 10 shows.

TABLE 10.--Training Workloads, FY 1977-86
(Thousands)

FY 77	FY 82	FY 85	FY 86	Percent Change FY 77-86	Percent Change FY 82-86
238	256	269	280	+ 18%	+ 9%

The relatively smaller increase in training manpower as compared to training workload shows a productivity improvement in the Service training establishments. This is consistent with DoD's general emphasis on increased efficiency in support areas.

The Necessity for Good Training

The objective of individual training is to provide the operational forces with personnel adequately trained to assume jobs in military units. Without effective training and education programs, the operational forces would be manned with personnel who are less than fully qualified for their jobs. Since the nation cannot predict when or where war may break out or count on an extended period for mobilization, we must have effective individual training conducted in training institutions to assure that our operational units are capable of carrying out national security missions in peace or war.

MILITARY MANPOWER TRAINING REPORT FOR FY 1986

I

INTRODUCTION

Training Requirements and Manpower Requirements

Requirements for training and education of military personnel are derived ultimately from basic national security objectives. This Report, the Report of the Secretary of Defense to the Congress on the FY 1986 Budget, and the Defense Manpower Requirements Report, describe the progression from national security objectives to training load requirements. The Report of the Secretary of Defense explains the relationship between the threat and the forces designed to cope with the threat. The Manpower Requirements Report relates these forces to the requirement for trained manpower to man the forces. The Military Manpower Training Report takes as a starting point the requirement for trained military manpower described in the Manpower Requirements Report. It then describes how these requirements relate to the demand placed on the military training establishment to supply this trained manpower, and how this demand leads to the DoD request for military student training load authorizations for each component of the Military Services. The Manpower Requirements Report and this Report are mutually supportive; however, the data in the two reports are not interchangeable or directly comparable. The principal reason for this difference is that the main focus of the Manpower Requirements Report is upon requested strength on the last day of fiscal years (that is, end strength), whereas the main focus of this Military Manpower Training Report is upon requested student loads, a concept more comparable to average strength, or man-years, than to end strength.

Definition of "Individual Training and Education"

This report addresses the "individual training and education" activities of the Department of Defense. These involve the training of individual military members in formal courses conducted by organizations whose predominant mission is training; this training is to be differentiated from training activities conducted by operational units incidental to their primary combat, combat support, or combat service support missions. Training conducted in the unit environment, the training of organized crews and operational units for the performance of specific missions, is not included in the training loads discussed in this report, but is discussed in the Manpower Requirements Report. In certain categories of training, on-the-job training (OJT) in units supplements or substitutes to some extent for all or part of formal course training requirements; OJT is also not included in the training loads discussed in this report.

The purpose of individual training and education is to give individual servicemembers the skills and knowledge that will qualify them to perform effectively in subsequent assignments as members of

operational military organizations. "Individual training and education" includes all formal military and technical training and professional education conducted under centralized control, generally under the supervision of a Service training command or similar organization. The trainees and students undergoing the training or education addressed in the report include the following categories of personnel:

1. Active Force: officers, enlisted personnel, and Service Academy cadets and midshipmen.

2. Reserve Components: officers and enlisted members on active duty for training in formal school courses.

Training of some civilian students, prior to their entry into the Services, in such programs as ROTC, is also discussed in the report. However, training loads are properly requested only for training and education of personnel received while they are in active military status.

In general, the training discussed in this report is conducted under Major Defense Program VIII, "Training, Medical and Other General Personnel Activities," as presented in the Defense budget. Exceptions to these general rules are pointed out, where appropriate, in the body of the report.

Personnel undergoing individual training and education are classified, for manpower accounting purposes, as either trainees, students, or cadets, unless they are undergoing training while on temporary duty or temporary additional duty from their unit of assignment, or unless they are being trained while en route to new stations as transients. The term "trainees" is generally used for all enlisted personnel in Recruit Training and Initial Skill Training. "Cadets" (or "midshipmen" in the case of the Naval Academy) are members being educated at one of the Service Academies. All others receiving individual training and education are identified as "students". The distinction is not important for the purposes of this report, and the term "student" will be used where appropriate to describe members of all three classifications as well as temporary duty and transient personnel being trained.

The term "training" generally refers to instruction in military subjects either at a basic level, as in Recruit Training, or in a military or job-related technical specialty, such as pilot training or training in radar repair. "Education" generally refers to study either in more advanced subjects or in military subjects which apply to an entire Service or to the broad mission of national security, as, for example, the curriculum at the National War College. The term "training" will be used in this report to refer to individual training and education as a whole.

FY 1986 Training Report and the FY 1986 Budget

It is important to emphasize that this report, while consistent with the Department of Defense Budget for FY 1986, differs in structure from the budget justification in two major respects. Budget justifications are focused on explaining how, by whom, and why money is to be spent; budgets for training and their justifications, therefore, are prepared by the Service which conducts the training programs and must obtain funds to train personnel from other Services in addition to its own. By contrast, this report details and emphasizes the training loads of the components of the parent Service whose members are undergoing the training, and deals in less detail with resources and funds required by the Service which conducts the training. For example, Navy personnel being trained by the Air Force are treated in this report as part of the Navy military student training load, since they are being trained to fill Navy requirements. However, in budget documents, funds to conduct training for these students, who are a part of the Air Force training workload, are included in Air Force appropriation requests.

Definitions of Major Training Categories

The portion of this report which discusses training loads in detail is organized into five chapters (Chapters III through VII), each of which addresses one of the major categories of training. These major categories are briefly defined below. Each chapter will more fully describe the training category and its sub-categories, the requested training loads, and the training methodology.

Recruit Training includes the basic introductory physical conditioning, military, and indoctrination training given to all new enlisted entrants in each of the Services. One-Station Unit Training (OSUT) is an Army training program which meets the training objectives of both Recruit and Specialized Skill Training in certain skills through a single course for new Service entrants which is conducted by a single training unit. Since it includes elements of two categories of training, it is treated separately in this report.

Officer Acquisition Training, sometimes called pre-commissioning training, includes all types of education and training leading to a commission in one of the Services, such as the programs of the Service Academies and officer candidate schools. Students not in active military status, such as Reserve Officer Training Corps students, are excluded from requested loads in this report.

Specialized Skill Training provides officers and enlisted personnel with new or higher levels of skill in military specialties or functional areas to match specific job requirements.

This category includes Army Advanced Individual Training and Navy Apprenticeship Training. Certain flight-related training, such as

training of air traffic controllers and some aircraft mechanics, and survival training in the Air Force, is reported under Specialized Skill Training. None of the officer acquisition programs are included in Specialized Skill Training.

Flight Training provides the individual flying skills needed by pilots, navigators, and naval flight officers to permit them to function effectively upon their assignment to operational mission units. The Service undergraduate flight training programs culminate in an officer, or an Army warrant officer, receiving "wings" and being categorized as a "designated" or "rated" officer.

The undergraduate programs do not include the major formal advanced flight training programs. Training conducted by Service advanced flight training organizations is not considered individual training and is therefore beyond the scope of this report.

Professional Development Education includes educational courses conducted at the higher-level Service schools or at civilian institutions to broaden the outlook and knowledge of senior military personnel or to impart knowledge in advanced academic disciplines to meet Service requirements. Training of this type is required to prepare individuals for progressively more demanding assignments, particularly for higher command and staff positions. Programs include undergraduate and graduate education and other courses not leading to a degree.

Enlisted leadership training for senior non-commissioned officers is included in Professional Development Education rather than in Specialized Skill Training to recognize its broad professional content. However, Navy leadership training, which is given to all grades of petty officers, is included in Specialized Skill Training, as is the rest of noncommissioned officer training for more junior personnel conducted by the other Services.

Determining Training Requirements and Training Load

The amount and type of training to be conducted in the Department of Defense is the product of a series of calculations that is described in Appendix A to this report.

In brief, the process begins with the determination of the requirement for military personnel with specific skills to fill positions in the approved or projected force. The requirement for trained manpower must then be measured against the available inventory of trained personnel projected at various points in the future. This comparison, made for each military skill and skill level, establishes the need for the training of personnel, on a phased basis, to fill current and projected skill shortages. The requirement for the training of personnel on a schedule calculated to maintain the skill inventory becomes the workload of the Service training establishments. It is measured in terms of the average military training student load, or "training load". The training load

for a given period is not only a measure of the amount of training to be accomplished; but, adjusted to take account of the Service conducting the training, it becomes a "workload" and thus it is also a basis for establishing the requirement for resources (manpower, funds, materiel and facilities) needed to support the training to be conducted by a Service.

Conceptually, the training load for a given period is the average student strength for the period, and approximates manyears. The total training load is the sum of the loads for all the included individual courses. Training loads for individual courses are determined by the following factors:

1. The length of the training course.

2. The desired number of graduates, or output, of the course.

3. The number of entrants, or inputs, into the course required to obtain the desired output. This, in turn, depends on the pattern of attrition, or failures of entrants to graduate, for the course.

If attrition occurs at a constant rate during a course, the training load is computed by the following formula:

$$\frac{\text{Entrants} + \text{Graduates}}{2} \times \begin{array}{l}\text{Course Length (expressed}\\ \text{as a fraction of a year)}\end{array} = \text{Load}$$

This is the basic method for computing the training loads discussed in this report. However, if attrition does not occur at a uniform rate, as is frequently the case, and the rate and phasing can be specified, more complex formulas and computer simulations are used to estimate training loads.

Accuracy in Projecting Training Loads

In accordance with law, training load authorizations must be requested well in advance of the period when the training is actually conducted. This year, for example, in addition to the more refined estimates of loads needed for FY 1986, load authorizations must be requested for the fiscal year which begins more than a year after the request is submitted -- that is, loads for FY 1987, beginning October 1, 1986, must be requested in the spring of 1985. This statutory requirement implies the capability to predict future training loads with precision. In actuality, while loads for some long-leadtime programs, such as the Service Academies, can be predicted with considerable accuracy, there are many uncertainties in projecting training loads. Some of the causes of uncertainty are:

1. Unpredictability of individual decisions to enlist or reenlist, this factor may lead to unanticipated changes in the skill

inventory, requiring changes in the composition or size of training loads, or to shifts of portions of the training load from one fiscal period to the following period.

2. Unanticipated changes in force structure, requiring a readjustment of the skill inventory and the mix of courses in the training load.

3. Changes in attrition rates and patterns, causing unprogrammed fluctuations in training rates and loads.

By forecasting training needs as far as possible into the future and continuously reviewing and adjusting training inputs and loads, the Services are able to adapt the training system to changing conditions. However, it should be clear that extended projections are subject to error; adjustments are inevitable and, in fact, necessary for good management.

Training Load Request by Component and Category

The tables on the following two pages display in category detail the requested training loads for FY 1986 and FY 1987. The loads for each period are displayed by component and by each of the major categories of training.

TABLE I-1.--Military Training Student Loads, Fiscal Year 1986, By Component and Major Training Category

	Recruit Training	One-Station Unit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces							
Army	13,540	12,290	5,335	43,810	1,265	3,446	79,686
Navy	15,015	-	6,924	45,015	1,960	2,104	71,018
Marine Corps	8,082	-	269	11,050	527	838	20,766
Air Force	8,047	-	6,401	22,221	2,806	3,914	43,389
Subtotal	44,684	12,290	18,929	122,096	6,558	10,302	214,859
Reserve Components							
Army Reserve	4,788	2,236	4	9,762	108	87	16,985
Army National Guard	3,741	6,394	44	8,420	232	55	18,886
Naval Reserve	1,513	-	0	1,800	0	42	3,355
Marine Corps Reserve	2,117	-	190	1,451	0	32	3,790
Air Force Reserve	443	-	14	1,497	85	79	2,118
Air National Guard	677	-	0	1,790	240	44	2,751
Subtotal	13,279	8,630	252	24,720	665	339	47,885
Total	57,963	20,920	19,181	146,816	7,223	10,641	262,744

TABLE I-2.--Military Training Student Loads, Fiscal Year 1987, By Component and Major Training Category

	Recruit Training	One-Station Unit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces							
Army	13,431	11,995	5,423	43,714	1,312	3,553	79,428
Navy	13,920	-	7,106	44,892	2,018	2,144	70,080
Marine Corps	8,669	-	269	11,226	556	842	21,562
Air Force	8,839	-	6,545	23,932	2,805	3,784	45,905
Subtotal	44,859	11,995	19,343	123,764	6,691	10,323	216,975
Reserve Components							
Army Reserve	4,766	2,424	4	10,442	143	97	17,876
Army National Guard	3,965	7,882	34	10,204	264	60	22,409
Naval Reserve	1,629	-	0	1,895	0	42	3,566
Marine Corps Reserve	1,933	-	190	1,452	0	32	3,607
Air Force Reserve	443	-	14	1,461	95	79	2,092
Air National Guard	597	-	0	1,825	254	44	2,720
Subtotal	13,333	10,306	242	27,279	756	354	52,270
Total	58,192	22,301	19,585	151,043	7,447	10,677	269,245

II

TRAINING PATTERNS

General Description

The development of servicemembers through formal training and education and practical experience generally follows a common pattern. The new servicemembers (or, in the case of some Officer Acquisition Training, the prospective servicemembers) first receive training designed to develop the basic attributes of all members of their Service. In most cases, the graduate of the initial training is then taught the skills required for a military job at the lowest skill level. Those servicemembers who do not remain beyond their initial enlistments or obligated terms of service do not, in most cases, receive additional formal training. Those who remain, the career members, will further develop their military knowledge and skills through experience in military jobs, interspersed, as required, with training or education needed to prepare them for more responsible positions. During any part of their terms of service, military personnel are also encouraged, as their military assignments may permit, to improve their educational attainments to the benefit of themselves and their Services through off-duty and voluntary education programs that may be available. This combination of job experience, training and education is essential to the development of a military force that is capable of carrying out the national security mission.

Enlisted personnel usually work in relatively specialized skill fields, whereas the duties of officers, particularly of those in the career force, call for broader expertise. For these reasons, the training and education patterns of officers and enlisted personnel differ, and will be discussed separately in the following sections of this chapter.

Officer Training Patterns

Each Service has developed career patterns to prepare its officers to assume progressively higher command and staff responsibilities. These career patterns are composed of operational assignments, during which the officers learn their professions through experience, and periodic individual training and education, which provide them with knowledge and skills needed for progressively more demanding subsequent assignments.

Officer training and education can be divided generally into three types. First, each Service maintains a system of professional military education that is progressive in nature. This education is related more to the increasing responsibilities associated with career progression to more senior grades than to the individual's current assignment or specialty. It is primarily the study of officership and the command and staff knowledge required of all professionals. The second type of

education and training includes the many specific skill-producing courses that are conducted to enable the officer to perform immediately upon assignment to a specialized or functional area. These courses vary in length from a few days to several months. They present, for the most part, strictly job-oriented training, and are often in the nature of orientation or refresher courses. Third, the Services also provide selected officers with advanced academic education, either in-house or at civilian institutions, to meet specific requirements for officers educated in technical, scientific, engineering, and managerial fields. Officers also participate in a variety of other educational programs, many on a part-time basis, usually with the student sharing in the cost.

Training and education for career officers, involving one or more of the types of training and education described above, follow the general patterns outlined in the following paragraphs. The patterns vary among the Services to some extent, and not all officers will participate in all of the schooling described. The number of officers participating in schooling becomes progressively smaller, and participation more selective and demanding, as officers move through their careers.

Non-career officers (those who may be expected to serve only an initial tour of active duty) generally receive training only at the entry level. In some cases, they may receive skill-oriented courses such as pilot training, which is lengthy and results in a commensurately longer active duty obligation, or training as maintenance or communications officers.

Entry Level Training. Upon entry, the young officers' initial training is Service-oriented and intended to prepare them for duties at the lowest operational level -- company, squadron, or ship. The newly commissioned Army officers will attend a basic course conducted by the particular branch of the Army to which they are assigned, such as infantry, armor or artillery. Navy ensigns are usually assigned to school training based on their warfare specialty. The new Marine officer attends the Officer Basic School. A newly commissioned officer in the Air Force may go to Flight Training or training in a technical specialty.

Career Training. After some operational experience, the career officer requires further professional military education to prepare for service at the next level -- for example, as a unit commander or a headquarters staff officer. In the Army, this entails a return to branch school for more advanced training. An Air Force officer could be selected for the Squadron Officer School. A Marine Corps officer would normally attend the Amphibious Warfare School. Navy officers at this stage in their careers may attend a school in a specialty appropriate to their future assignments.

To satisfy Service requirements and as a further step in professional development, some officers are selected for participation in an advanced academic educational program at a civilian institution or one of the two Service technical institutes, the Naval Postgraduate School and the Air Force Institute of Technology.

Intermediate Service Schools. As officers progress (between six and 16 years of service, depending on Service criteria) they are ready for the next, or command and staff, level of professional military education in preparation for assuming higher responsibilities. Attendance is competitive, as not all officers are selected to attend Each Service has such a course; the Armed Forces Staff College, a joint school, is also conducted at this level. Each Service has its own emphasis with regard to this schooling because of its pattern of missions; these differences are reflected in the school curricula.

Senior Service Colleges. Subsequent to the intermediate years, little technical training is provided. The final level of professional military education is that of the Senior Service Schools -- the war colleges -- for which attendance is highly selective. The Army, Navy, and Air Force each has a war college. In addition, there is the National DefenseUniversity, consisting of the National War College and the Industrial College of the Armed Forces. Officers graduating from the Senior Service Schools have the academic foundation required for command and staff positions at the highest level. The different curricula of these schools reflect the differing patterns of missions among the Services.

Enlisted Training Patterns

Individuals entering upon an initial enlistment are provided Recruit Training that introduces them to military life. Following this indoctrination training, they will follow one of three possible avenues:

1. Initial Skill Training, which prepares the enlistee for an initial duty assignment, or

2. Direct duty assignment on the basis of a skill already acquired in civilian life, or

3. Direct assignment to first duty unit for on-the-job training (OJT).

The Army One-Station Unit Training (OSUT) program is a variation of the first of these three avenues, since it combines Recruit and Initial Skill Training into a single course, followed by assignment to an operational unit. About 34 percent of Active Army entrants to initial enlisted training will be trained under the OSUT in FY 1986. For the Reserve Components, 41 percent of the Army entrants will receive OSUT.

The expected distribution of Active Recruit Training graduates in FY 1985 is shown in Table II-1.

TABLE II-1.--Disposition of Active Recruit Training Graduates in FY 1985

	Army	Navy a/	Marine Corps	Air Force
To Initial Skill Training	98%	93%	90%	93%
To Duty Assignment (Civilian-Acquired Skill)	1%	*	*	1%
To Duty Assignment (On-the-Job Training)	1%	7%	10%	6%
	100%	100%	100%	100%

*Less than 1/2 percent.

a/ 22% of Navy Recruit Training graduates attend short "Apprenticeship Training" courses (carried under Initial Skill Training in this report) as a preliminary to further training on the job.

As the table indicates, most enlisted personnel receive formal Initial Skill Training to provide them with a basic military skill. The combination of Recruit Training and Initial Skill Training (or Army One-Station Unit Training) is the foundation of the development of enlisted personnel, because it turns civilians into servicemembers who are qualified to fill positions in military units.

Other than for on-the-job training in the work environment, enlisted personnel normally receive no further formal training beyond the training previously described during their initial enlistments. The major exception is Navy training, conducted by fleet training centers, in such shipboard duties as firefighting.

Subsequent to reenlistment, individuals may be selected for attendance at a journeyman level course in their specific occupational areas. This training emphasizes the appropriate military applications for the skills being taught. In most cases, however, enlisted personnel advance in their skill areas through experience gained on the job and without extensive additional formal training. Some enlisted personnel are given the opportunity to attend NCO professional development training programs which prepare them for increased supervisory and leadership responsibilities.

Normally, few enlisted personnel attend regularly programmed specialized courses after mid-career. There are instances, of course, where new equipment or systems are introduced into a Service, and senior level enlisted personnel are formally trained in operation and maintenance techniques. Selected senior enlisted personnel attend schools, such as the Army's Sergeants Major Academy, which are, on the NCO level, similar in purpose to the Intermediate and Senior Service Schools in the officer education system.

III

RECRUIT TRAINING AND ARMY ONE-STATION UNIT TRAINING

General Description

Recruit Training is the basic introductory and indoctrination training given to enlisted personnel of each Service upon their initial entry into military service. Recruit Training provides an orderly transition from civilian to military life, motivation to become a dedicated and productive member of the service, and instruction in the basic skills that are required by all members of the Military Service involved. Training in each of the Services emphasizes discipline, observance of military rules, social conduct, physical conditioning, and the building of self-confidence and pride in being a member of the service. Beyond these common objectives, Recruit Training in each Service is designed to meet the particular training requirements of that Service which are a reflection of the Service mission. Graduates of Recruit Training have the basic knowledge and skills required to qualify them, after formal or on-the-job training in a particular skill, for service in an operational unit of the parent Service.

Army One-Station Unit Training (OSUT) is unique in that it combines Recruit Training and Initial Skill Training in certain skills into a single course conducted by a single training unit at a single training installation. OSUT therefore includes elements of two major training categories; consequently, it is treated separately at the end of this chapter. OSUT training loads are not included within the Recruit Training loads displayed in this chapter.

Recruit Training Loads

The training loads for FY 1978 through FY 1986 for each component of each Military Service are shown in Table III-1 on the following page.

TABLE III.--RECRUIT TRAINING LOADS, FY 1978-86 a/

Service Component	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
Army b/									
Active	12,957	9,141	10,453	9,831	10,533	12,726	12,366	12,805	13,540
Reserve	1,620	2,062	2,339	2,959	4,378	3,687	3,688	4,584	4,788
Natl Guard	3,884	2,707	2,661	2,835	3,590	3,184	2,818	3,228	3,741
Navy									
Active	14,199	12,440	13,597	14,288	13,315	12,816	12,780	13,470	15,015
Reserve	361	294	290	339	312	305	1,385	1,619	1,513
Marine Corps									
Active	9,652	9,859	10,166	9,691	9,434	8,555	9,459	8,880	8,082
Reserve	1,935	1,446	1,623	2,013	2,031	1,977	2,045	1,857	2,117
Air Force									
Active	8,151	7,712	8,872	9,423	8,361	7,411	6,727	8,047	8,047
Reserve	301	249	297	368	397	376	343	463	443
Natl Guard	459	426	677	740	749	575	540	592	677
DoD									
Active	44,959	39,152	43,088	43,233	41,643	41,508	41,332	43,202	44,684
Res/Gd Tot	8,560	7,184	7,887	9,254	11,457	10,104	10,819	12,343	13,279
DoD Total	53,519	46,336	50,975	52,487	53,100	51,612	52,151	55,545	57,963

a/ In this table and in all subsequent tables in this report, training loads for the years prior to and including FY 1984 data are actual, FY 1985 and subsequent year data are estimated.

b/ Data do not include Army One-Station Unit Training loads.

Recruit Training

The following table displays for Recruit Training the average training loads for each year from FY 1984 to 1986 and, for FY 1986, the number of entrants (input) and number of graduates (output). Data are shown separately for each component of each Service.

TABLE III-2.--Training Inputs, Outputs, and Loads, Recruit Training FY 1984 - 86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	12,366	12,805	88,893	80,358	13,540
Reserve	3,688	4,584	32,143	27,707	4,788
Natl Guard	2,818	3,228	24,873	21,888	3,741
Navy					
Active	12,780	13,470	98,042	91,776	15,015
Reserve	1,385	1,619	10,000	8,106	1,513
Marine Corps					
Active	9,459	8,880	33,294	30,530	8,082
Reserve	2,045	1,857	9,000	7,576	2,117
Air Force					
Active	6,727	8,047	65,000	60,775	8,047
Reserve	343	463	3,654	3,402	443
Natl Guard	540	592	5,600	5,197	677
DoD					
Active	41,332	43,202	285,229	263,439	44,684
Res/Gd Tot	10,819	12,343	85,270	73,876	13,279
DoD Total	52,151	55,545	370,499	337,315	57,963

Each of the Services conducts training for women recruits that is similar in concept to Recruit Training for males. The training syllabi are essentially the same for males and females. In the Navy and Marine Corps, male and female Recruit Training is collocated but not integrated. The major difference between these male and female courses is that women recruits generally receive less training in weapons use and other combat oriented skills. The de-emphasis on combat skills in the Marine Corps causes the length of training for women to be somewhat shorter.

Rationale for Recruit Training

The underlying philosophy of Recruit Training in each of the Services is that the demands of military service are fundamentally different from those of civilian life. Military service requires a high level of discipline and physical fitness, a homogeneity of outlook, and an ability to live and work as part of a highly structured organization. There are few parallels in civilian society to the demands of military service. Each recruit, therefore, must be transformed into a member of the military team in order to function effectively in the military environment. The attitudes, habits, and basic skills formed in Recruit Training are the foundation of a cohesive military organization. Later training provides the skills and knowledge needed for specific jobs; Recruit Training shapes the civilian entrants into dedicated members of their Military Services with the potential for further development.

The major determinants of Recruit Training loads are the total number of people entering service who must receive Recruit Training (input), the length of the training course, and projected patterns of attrition. Course length and attrition are discussed later in this chapter. The following two sections discuss inputs: first, inputs of active duty personnel, and second, inputs of members of the Reserve Components on active duty for initial training.

Active Duty Input

The annual recruiting objective for active duty enlistees without prior military service is a function of the following factors:

1. The projected requirement for trained enlisted personnel.
2. Current enlisted trained strengths.
3. Number of enlisted personnel currently in training.
4. Projected enlisted losses through separations or other reasons (e.g., desertion, death, acceptance of a commission, etc.).
5. Projected prior-service enlistments -- that is, the return from civilian life of former service-members.

"Trained strength" is the number of personnel required to fill "structure" spaces (i.e., positions in military organizations that require specific grades and skills) and individual "pipeline" spaces, such as transients en route between assignments. The Defense Manpower Requirements Report contains a full discussion of how military manpower requirements are determined. The projected trained strength requirement is compared with the projected trained strength inventory to forecast future skill and strength imbalances. Future shortages that are not expected to be satisfied either by prior-service enlistees or service-members currently in skill training courses determine the training output needed to man the force with trained personnel. To determine the necessary input to achieve this output, allowance must be made for course attrition, the number of students entering a course of instruction who fail to complete it. The total input requirement must, therefore, be increased to compensate for expected attrition losses.

The optimal leveling of monthly inputs to obtain the most efficient use of training staff personnel and training facilities is a continuing goal. However, the phasing of inputs must at times be varied in order to take advantage of the best recruiting periods for maintaining quality and quantity.

Historically, June through September and January have been the most productive recruiting months, reflecting behavioral patterns that are related to the civilian academic calendar. Enlistments increase (1) shortly after high school graduation, (2) when peers return to school in the fall, and (3) after the results of the first term academic work are announced.

The Services must accept most prospective enlistees at the time they are ready to enter service. Requiring enlistees to enter military service in phase with requirements and on an even-flow basis would result in the loss of many potential enlistees to other sources of employment. Accepting enlistees as they become available, however, requires a training structure capable of accommodating peak surges of enlistments.

Reserve Component Input

Persons enlisting in the National Guard and Reserve forces without active duty experience require the same Recruit Training as active duty enlistees, and for the same reasons. Recruit Training loads for the Reserve Components are based on the same factors as active force loads. Guard and Reserve trainees, while in Recruit Training, are mingled with active duty trainees in units so that their training is identical.

Reserve Component recruits form a significant part of the workload of the active Recruit Training establishment. In FY 1986, 23 percent of DoD Recruit Training loads are attributable to Guard and Reserve trainees.

The planning considerations for Reserve Component personnel are essentially similar to those for the active force; detailed phasing of this training is complicated, however, by the additional consideration of civilian employment or school commitments for these personnel. For this reason, a pool of personnel who have been enlisted but who have not yet been able to attend entry training is normal. It is important that this backlog is kept within a reasonable size.

Course Length and Course Content

Enlisted training loads depend not only upon the numbers of entrants but also on the extent of skills required of entering enlisted personnel by each Service. Enlisted personnel attain those skills in Recruit Training and in Specialized Skill Training. Specialized Skill Training is discussed in a subsequent chapter. Recruit Training course lengths are determined in part by how much of the required training is to be provided during the Recruit Training phase and how much is to be deferred to later training. The four Services, because of differences in their missions, take somewhat different approaches in establishing the content and length of their Recruit Training courses.

Recruit Training in each of the Services covers four areas: (1) some processing and testing; (2) introduction into Service life; (3) instruction in military courtesy, discipline, and hygiene; and (4) fundamental military-related training involving physical fitness, military drill, and self-defense. In addition, each Service provides training in military skills that should be possessed by all, or almost all, members of that Service. The degree to which these Service-wide required skills exist differs widely among the Services. This factor accounts for most of the differences in course content and, therefore, course length. The variance in quality of enlistees among the Services also has a bearing on course length; recruits with lower intelligence and lesser amenability to discipline require a longer training period to achieve training objectives.

The length of the standard Recruit Training course in each Service is shown in the following table:

TABLE III-3.--Recruit Training Course Lengths, FY 1986 (Weeks)

Army	Navy	Marine Corps	Air Force
8.0	7.4	10.3	6.0

Army and Marine Corps Recruit Training differ from the Air Force and Navy programs because all recruits are given intensive physical conditioning and instruction in basic ground combat skills, including the use of individual weapons. These Services subscribe to the view that all enlisted personnel must achieve a basic level of qualification in ground combat skills, and their Recruit Training curricula both provide a common core of training in these skills.

The Air Force accomplishes all Recruit Training in six weeks. Course content concentrates on indoctrination subjects. Relatively little training in Service-wide skills is provided, since there are few common skills needed by all Air Force enlisted personnel. In addition to subjects oriented toward indoctrinating recruits to military life, the Navy course includes phases designed to prepare them for conditions in a fleet environment. The Navy must be sure that recruits learn to live, work, and fight in restricted space such as they will find on board ship, often close to complex machinery and weapons.

The average length of time spent in recruit status in any of the Services may be longer than the standard course lengths discussed above. Some recruits fall behind their peers because of illness. Others require remedial training. If this cannot be accomplished by additional instructional hours the recruit may be sent to a special training unit or recycled to a following class to repeat a portion of the course.

The common objective of transforming a civilian into a disciplined servicemember tends to set a floor under the length of Recruit Training in each of the Services. Relatively few recruits have had much experience with life in a disciplined environment, been separated from their families and friends, or subjected to the stresses imposed by military life. Compensating for these factors takes not only training but also time. A minimum of six weeks in Recruit Training appears necessary to accomplish this objective alone in any of the Services. Greater amounts of time are required for those Services that must provide extensive training in required common skills.

Attrition in Recruit Training

A final factor in the computation of loads is the projection of the rate and timing of attrition. Recruits may fail to complete training for medical reasons, inability to absorb the instruction, lack of motivation, disciplinary problems, or a variety of administrative causes, such as discharge for fraudulent enlistment or family hardship. Table III-4 shows projected attrition losses for FY 1985 and FY 1986.

TABLE III-4.--Recruit Training Attrition Projections, FY 1985 and FY 1986
(Active and Reserve Combined)
(Percent)

	Army	Navy	Marine Corps	Air Force
FY 85	10.5%	8.7%	13.0%	6.5%
FY 86	10.5%	8.7%	10.1%	6.5%

The timing of attrition varies from case to case. In the case of slow learners or individuals who have difficulty in adjusting to military life, trainees usually are reentered or given special instruction; those who do not respond adequately may not become attrition losses until late in the course.

Army One-Station Unit Training

The Army's One-Station Unit Training (OSUT) program combines Recruit Training and Initial Skill Training for certain skills into a single continuous course. Consequently, this report treats OSUT separately rather than arbitrarily breaking it into two segments.

OSUT loads for FY 1979 through 1986 are shown in the following table.

TABLE III-5.--OSUT Training Loads, FY 1979-86

Service Component	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
Army								
Active	16,944	20,651	15,003	13,137	15,657	14,192	13,028	12,290
Reserve	1,861	1,831	2,042	1,965	2,717	1,923	2,215	2,236
Natl Guard	4,973	6,229	6,580	5,528	5,860	4,873	7,269	6,394
Res/Gd Tot	6,834	8,060	8,622	7,493	8,577	6,796	9,484	8,630
DoD Total	23,778	28,711	23,625	20,630	24,234	20,988	22,512	20,920

Table III-6 displays OSUT inputs and outputs, as well as loads, for FY 1986.

TABLE III-6.--Training Inputs, Outputs, and Loads, OSUT, FY 1984-86

Service Component	FY84 Load	FY85 Load	FY86 Input	FY86 Output	FY86 Load
Army					
Active	14,192	13,028	46,585	41,699	12,290
Reserve	1,923	2,215	10,739	9,741	2,236
Natl Guard	4,873	7,269	29,478	26,434	6,394
Res/Gd Total	6,796	9,484	40,217	36,175	8,630
DoD Total	20,988	22,512	86,802	77,874	20,920

In FY 1976, less than five percent of Army non-prior service entrants were trained under OSUT. In FY 1986, about 34 percent of active Army entrants to recruit training will be trained by this method. In FY 1986 there will be 41 difference courses in OSUT that relate to Initial Skill Training. OSUT requires less training time than the separate Recruit Training and Initial Skill Training courses that it replaced.

The following table shows training time for OSUT courses.

TABLE III-7.--OSUT Training Time, FY 1984-86

Skill Area	Training Time (Weeks)		
	FY 84	FY 85	FY 86
Infantry	12.6	12.7	12.7
Artillery	13.6	13.7	13.7
Armor	13.6	13.7	13.7
Engineer	14	14.2	14.2
Military Police	15.6	15.5	15.5
Air Defense	14.5	14.6	14.6

The time that would be required to complete Recruit Training and the Initial Skill Training in separate courses for these skills would be about 4 weeks longer, including the time required to move the trainee from one training organization to another. The shorter OSUT course lengths provide a significant savings in trainee manyears and, consequently, in trainee pay, allowances, and support costs. Moreover, the Army's extensive tests of OSUT indicate that the quality of OSUT graduates is generally as good as the quality of personnel trained under the longer two-course training system.

IV

OFFICER ACQUISITION TRAINING

General Description

Officer Acquisition Training consists of training and education programs leading to a commission in one of the Military Services. These programs fulfill the need both for junior officer entrants into the career force and for non-career junior officers in the force structure. Officer Acquisition Training programs produce officers for both the active forces and the Reserve Components.

Training loads for Officer Acquisition Training are shown in Table IV-1 on the following page.

TABLE IV-1.--Total Officer Acquisition Training Loads, FY 1978-86

Service Component	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
Army									
Active	4,777	4,776	4,741	4,636	4,850	4,809	5,222	5,243	5,335
Reserve	1	3	5	4	4	3	4	4	4
Nat'l. Guard	46	47	42	44	49	27	44	41	44
Navy									
Active	5,769	5,873	5,661	6,389	6,498	6,497	6,446	6,879	6,924
Reserve	30	35	29	12	31	0	0	0	0
Marine Corps									
Active	388	269	249	268	281	432	294	282	269
Reserve	413	309	224	264	309	302	187	190	190
Air Force									
Active	5,320	5,816	6,032	5,776	6,050	6,555	6,457	6,526	6,401
Reserve	2	8	10	13	12	19	15	14	14
Nat'l. Guard	0	0	0	0	0	0	0	0	0
DoD									
Active	16,254	16,734	16,683	17,069	17,679	18,293	18,419	18,930	18,929
Res/Gd Total	392	402	310	337	405	351	250	249	252
DoD Total	16,646	17,136	16,993	17,406	18,084	18,644	18,669	19,179	19,181

Excluded ROTC and Health Professions Acquisition Programs

The total loads in Table IV-1 do not include two types of Officer Acquisition Training: the Army, Navy, and Air Force Reserve Officers Training Corps (ROTC) programs and the Armed Forces Health Professions Scholarship program. ROTC and Health Professions Scholarship students are not in active military status, whereas students who make up the training loads discussed in this report are either members of the active forces or members of the Reserve Components being trained on active duty by the active establishments. Although these two programs are not included in the requested training loads, they are discussed in this chapter to provide a complete account of Officer Acquisition Training. The following tables show the number of participants in these programs in the period FY 1984 through 1986.

TABLE IV-2.--Average Enrollees, Senior ROTC Programs, FY 1984-86

Service	FY 1984	FY 1985	FY 1986
Army	72,038	65,897	70,857
Navy	10,423	10,915	11,278
Air Force	22,887	23,839	24,020
DoD Total	105,348	100,651	106,155

TABLE IV-3.--Health Professions Scholarships, FY 1984-86

Service	FY 1984	FY 1985	FY 1986
Army	1,453	1,325	1,248
Navy	1,300	1,200	1,100
Air Force	1,420	1,342	1,223
DoD Total	4,173	3,867	3,571

The figures shown above for Health Professions Scholarships are actuals for FY 1984; the FY 1985 and 1986 figures are those currently authorized by DoD to each Service from the total of 5,000 authorized scholarships.

Junior ROTC is a program designed to develop leadership qualities, good citizenship, and an understanding of the basic elements of national security among high school students. Despite its name, it is not an officer acquisition program, since it does not result in a commission and its participants have no military obligation whatsoever. Junior ROTC is not included within training loads covered by this report.

Officer Requirements and Structuring the Officer Acquisition Program

Requirements for new officers, like requirements for new enlisted personnel, are a product of the need for officers in the projected force

as compared to the projected future inventory of officers. Properly functioning programs fill the gross requirements for officer entrants for any given year, and provide an even flow of sufficient new officers to each Service to avoid the emergence of unmanageable shortages and overages by age and grade in the future. Each of the Services uses a mix of sources for new officers.

The mix of officer acquisition programs used must recognize the characteristics of each source. Some of the differing characteristics of current programs are stable input, long lead-time; flexible inputs, short lead-time; high academic quality with comprehensive military indoctrination; and high level of technical skill. Additionally, consideration must be given to each program's ability to attract applicants, the quality of the graduates, and their probable retention and attrition. These differences and others must be recognized and exploited in planning officer procurement.

The Service Academies present a long lead-time program that produces a significant proportion of highly trained career military officers.

ROTC is also a long lead-time program and provides the largest single input of officers to the active duty force, although many of these officers will leave active duty and join the Reserve Components. In this manner, ROTC provides officers to support the total force, both active and reserve.

Officer Candidate Schools provide the short lead-time commissioning source necessary to respond to immediate surges in officer requirements, since the programs can be expanded or reduced in a relatively short period of time.

The off-campus commissioning programs, such as the Marine Corps Platoon Leader Corps (PLC) program, are long lead-time programs, and provide the student at virtually any four-year college or university the opportunity to earn a commission through summer training but without military responsibilities during the school year. Finally, Other Enlisted Commissioning Programs are long lead-time in nature, and provide a source of officers who possess specific technical skills and who have a proven high rate of retention.

In addition to these reasons for using a variety of sources to satisfy officer requirements, it is also desirable to use different sources to keep the officer corps from being restricted to a narrow segment of the national population and to provide opportunities for highly qualified enlisted personnel.

Officer Acquisition Training may be divided into six separate programs:

Service Academies
ROTC
Officer Candidate Schools
Off-Campus Commissioning Programs
Enlisted Commissioning Programs
Health Professions Acquisition Programs

Service Academies

The mission of each of the Service Academies (United States Military Academy, United States Naval Academy, and United States Air Force Academy) is to meet a portion of the long-range requirement for career military officers. They provide instruction and experience to cadets or midshipmen so that they graduate with the knowledge and character essential to leadership and with the motivation to become career officers. Cadets and midshipmen participate in a four-year program of academic studies and training in leadership and other military subjects. Successful completion of the specified academic and military requirements entitles the graduate to a Bachelor of Science degree and a Regular commission in one of the Military Services. Up to one-sixth of Naval Academy graduates in each year may be commissioned in the Marine Corps.

The Service Academies are distinctive among the collegiate institutions of the nation in that their curricula are specifically designed to prepare young men and women for service as professional officers. The total curriculum at each Academy is designed to develop the qualities of character, intellect, and physical competence needed by the officer who may, in the course of a full career, be called upon to perform duties ranging from leading a small combat unit to advising the highest government councils. The programs include the sciences, the humanities, and military and physical training, and form the basis for further professional development or, when required, graduate education.

The enrollment of each of the Service Academies is established by law. This fact establishes stable training loads for the Academies. Training load data for the Service Academies are shown in Table IV-4.

TABLE IV-4.--Training Inputs, Outputs, and Loads, Service Academies, FY 1984-86

Service	FY 84	FY 85	FY 86		
	Load	Load	Input	Output	Load
Army	4,140	4,156	1,350	970	4,178
Navy	4,363	4,373	1,320	1,032	4,348
Air Force	4,231	4,222	1,450	896	4,228
DoD Total	12,734	12,751	4,120	2,898	12,754

Each of the Military Departments sponsors an Academy preparatory school. Marine Corps personnel attend the Navy school. The missions of these schools are to provide intensive instruction and guidance, in courses of instruction approximating one academic year, to selected enlisted personnel in preparation for entry to the Service Academies. Students compete for appointments by the Secretaries of the Military Departments and from other sources. The Naval Academy Preparatory School also provides instruction to candidates for the Marine Corps Enlisted Commissioning Education Program during the summer months. Training load data for the Academy preparatory schools is shown in Table IV-5.

TABLE IV-5.--Training Inputs, Outputs, and Loads, Academy Preparatory Schools, FY 1984-86

Service	FY 84	FY 85	FY 86		
	Load	Load	Input	Output	Load
Army	241	226	340	222	282
Navy	220	230	300	210	230
Marine Corps	9	16	25	14	16
Air Force	200	210	260	190	210
DoD Total	670	682	925	636	738

ROTC Programs

ROTC is a long lead-time program which is the single largest source of officers for the Armed Forces. Like the Service Academies, ROTC is used to provide a relatively constant input of officers for active duty, but ROTC also provides non-career officers as well as career officers. The program is currently conducted at over five hundred civilian colleges and universities throughout the nation. The Army, Navy, and Air Force each sponsor an ROTC program; up to one-sixth of the Navy graduates may be commissioned in the Marine Corps. Scholarships and subsistence allowances authorized by law, in addition to conventional recruiting and advertising methods, are used to attract qualified students. Scholarships are awarded to young men and women who exhibit potential ability and interest in fields of projected Service needs.

There are both scholarship and non-scholarship, as well as two-year and four-year, ROTC programs. The curriculum of each program is tailored to the needs of the individual Services. For example, the Navy teaches the basics of ship navigation, while the Army teaches the fundamentals of ground combat and the Air Force provides some basic instruction in aerospace history and doctrine. Each of the programs includes instruction in leadership, military customs and military history, and each program provides prospective officers with a gradual transition from the

civilian environment to the military environment. Each ROTC program consists of a series of regularly scheduled academic classes throughout the school year combined with mandatory summer camps or cruises which are designed to give the student realistic military experience and a first-hand view of military life.

The ROTC scholarship continues to be an important incentive to attract exceptionally qualified individuals to ROTC. The rising cost of education makes the scholarship even more attractive. The Congress increased the number of ROTC scholarships from 19,000 in FY 1979 to 29,500 authorized scholarships in FY 1982. The Army offered 6,000 scholarships in FY 1979; the 96th Congress authorized 5,500 additional Army ROTC scholarships in FY 1981 for a total of 12,000. In FY 1981, the Congress authorized the Navy 2,000 additional scholarships for a total of 8,000. The Air Force was authorized 3,000 additional scholarships for a total of 9,500. Both the Navy and the Air Force plan to phase in the awards at the rate of 500 additional awards a year until the authorized level is reached in FY 1987.

The ROTC program is being expanded through the establishment of more host institutions and new extension centers. Students at an extension center participate in the ROTC unit of a larger host institution. This practice extends the ROTC option to students attending the numerous small colleges and universities not large enough in themselves to support a viable ROTC unit. In FY 1980 the Army expanded its program by establishing 41 new extension centers. An additional 48 Army ROTC extension centers and eight new host institutions were established in FY 1981. Since the end of FY 1983 there have been a total of 314 Army ROTC hosts, up from 303 host institution in FY 1981. The Navy added additional host institutions for a total of 64 in FY 1985, and the Air Force plans additional units for a total of 153 AFROTC host institutions in FY 1987.

As noted at the beginning of this chapter, the ROTC program is not included in Service training loads because the students are not in an active military status. The following table shows the three Service ROTC programs for FY 1986.

TABLE IV-6.--Senior ROTC Programs in FY 1986

Service	Beginning Enrollments	Graduates	Average Enrollments	Average Number of Scholarship Enrollees
Army	73,982	8,300	70,857	11,629
Navy	4,136	1,406	10,423	7,169
Air Force	25,735	3,257	24,020	8,119
DoD Total	103,853	12,963	105,300	26,917

Off-Campus Commissioning Programs

The Officer Acquisition Training program in which college students participate but which is conducted off the college campus is the Marine Corps Platoon Leaders Class (PLC). This program provides for enlistment as a Marine Corps Reservist while the student is still an undergraduate and requires participation in summer military training.

Students participating in this program attend either one or two summer training sessions, depending upon when, during their college career, they were enrolled. The objective of the program is to indoctrinate, motivate, and train the enrollees by providing instruction in basic military subjects, leadership, and physical training. PLC students are commissioned when their college degrees are conferred; the newly commissioned Marine Corps officers then attend the Basic School at Quantico, Virginia.

In conformance with the nature of this program, the training loads in Table IV-7 are based only on the time spent in summer training. Loads, consequently, are low as compared to inputs and outputs.

TABLE IV-7.--Training Inputs, Outputs, and Loads, Off-Campus Commissioning Programs, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
USMC Reserve					
PLC	187	190	1,750	1,400	190

Officer Candidate Schools (OCS)

Each of the Military Services operates an Officer Candidate School. The Air Force school is entitled Officer Training School (OTS).

Enlisted members can use this route to "rise from the ranks". The existence of OCS programs, and the other enlisted commissioning programs covered in the next section, is therefore a significant advancement incentive to ambitious and promising enlisted personnel.

The four Services offer direct entry into OCS to selected college graduates without previous enlisted service. Some college students in highly specialized academic disciplines, such as engineering and physical sciences, feel that they cannot afford the time required to participate in ROTC; OCS provides a way to a commission for these persons and, as well, for other well-qualified persons who choose to become officers after graduation from college.

The following table shows the lengths of the various courses.

TABLE IV-8.--Course Lengths, Officer Candidate Schools

Service Course	Course Length (Weeks)
Army	
OCS: Active	14
Reserve	14
Navy	
OCS	16
Marine Corps	
OCS	9
Air Force	
OTS	12

Load data for OCS programs are shown in the following table.

TABLE IV-9.--Training Inputs, Outputs, and Loads, Officer Candidate Schools, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	248	250	1,100	750	250
Reserve	4	4	20	12	4
Nat'l Guard	44	41	200	125	44
Navy					
Active	582	793	1,521	1,280	804
Reserve	0	0	0	0	0
Marine Corps					
Active	70	65	336	231	53
Reserve	0	0	0	0	0
Air Force					
Active	665	859	3,341	2,856	747
Reserve	15	14	60	55	14
Natl Guard	0	0	0	0	0
DoD					
Active	1,565	1,967	6,298	5,117	1,854
Gd/Res Total	63	59	280	192	62
DoD Total	1,628	2,026	6,578	5,309	1,916

Other Enlisted Commissioning Programs

The Air Force, Navy, and Marine Corps each have enlisted commissioning programs in addition to Officer Candidate Schools. The purposes of these programs are: (1) to provide a source of officers in specific skills with an expected high rate of retention; (2) to provide an avenue whereby enlisted personnel with proven qualifications can augment the commissioned ranks; and (3) to provide a measure of motivation to enlisted personnel. The Navy's Enlisted Commissioning Programs now number seven and and have a planned training load of 1,026 in FY 1986. A similar program, the Marine Enlisted Commissioning Education Program, has been expanded to offer degrees in technical and liberal arts academic disciplines. Students in the USAF Airman Education and Commissioning Program (AECP) major in engineering and computer science or physical science, with matriculation up to three years; the average academic time spent in the program is about 27 months. In all these enlisted commissioning programs, participants attend the Officer Candidate School of their Service before they are commissioned. These programs provide a reliable alternative to OCS/OTS officer accessions, and like OCS/OTS, this education carries an active duty requirement. Both the Air Force and the Navy will continue to emphasize enlisted commissioning programs to increase officer procurement in FY 1985 and FY 1986.

The following table displays load data for these programs. All participants are members of the active forces.

TABLE IV-10.--Training Inputs, Outputs, and Loads, Other Enlisted Commissioning Programs, FY 1984-86

Service	FY 84	FY 85	FY 86		
	Load	Load	Input	Output	Load
Navy	1,281	1,483	1,336	1,026	1,542
Marine Corps	215	201	88	58	200
Air Force	1,169	1,040	470	402	1,025
DoD Total	2,665	2,724	1,894	1,486	2,767

Health Professions Acquisition Programs

This subcategory may be conveniently divided into two parts, the Armed Forces Health Professions Scholarship Program and the Uniformed Services University of the Health Sciences Program.

The Health Professions Scholarship Program was established in 1972 by Public Law 92-426. Participants are selected from among students, or those accepted for enrollment, in recognized health professions schools. Participants are commissioned in grade O1 in the Reserve of their parent Service, but, except for a short period of annual active duty, are not in active status. They are, therefore, not included within the training loads of their Services. Upon graduation, participants must serve obligated tours of duty, the length of which depends on the length of their participation in the program.

The program is authorized a total of 5,000 scholarships at its current level. Service data for FY 1986 are shown in Table IV-11.

TABLE IV-11.--Health Professions Acquisition Program, Scholarships Awarded and Graduates, FY 1986

Service	Scholarships	FY 1986 Graduates
Army	1,248	347
Navy	1,100	346
Air Force	1,223	386
DoD Total	3,571	1,079

An additional acquisition program for health professionals, the Uniformed Services University of the Health Sciences (USUHS), began operation in 1976. In accordance with PL 92-426, the student body of the USUHS is composed of commissioned officers of the Uniformed Services. The first students graduated from this program in 1980.

The USUHS plans an incoming class of 156 medical students in FY 1986. This institution will, over the long term, provide approximately 25 percent of DoD's projected physician requirements. Training inputs, output and loads for this DoD school for FY 1984-1986 are shown in Table IV-12.

TABLE IV-12.--Training Inputs, Outputs, and Loads, USUHS, FY 1984-86

FY 84	FY 85	FY 86		
Load	Load	Input	Output	Load
628	629	156	157	626

V

SPECIALIZED SKILL TRAINING

General Description

Specialized Skill Training provides officer and enlisted personnel with skills and knowledge needed to perform specific jobs. Each Service has established a job structure that makes it possible for it to carry out its assigned missions. Each position in each organization within that job structure has been analyzed to determine the skills necessary to insure that each job is done properly and efficiently. The purpose of Specialized Skill Training is to impart these required skills to the proper number of individuals in a phased manner so that each position vacancy in the structure can be filled promptly with a qualified replacement.

Specialized Skill Training, as used in this report, is characterized by the following:

Inclusions: Initial, progression, and functional training for both officers and enlisted personnel. Specialized Skill Training specifically includes Army Advanced Individual Training and Navy Apprenticeship Training. This training category also includes aviation-related ground training and enlisted leadership training below the level of that carried in Professional Development Education.

Exclusions: All Officer Acquisition Training programs, notably Officer Candidate School, formerly included in Specialized Training budget documents.

Army One-Station Unit Training (OSUT), as does Specialized Skill Training, provides Army personnel with job-related training in a number of skills. However, since OSUT is conducted as one course which combines Recruit and Specialized Skill Training, it is treated separately in this report (see Chapter III), and OSUT loads are not included in the Specialized Skill Training loads in this chapter.

Specialized Skill Training loads will increase by approximately 27,000 or 23% between FY 1984 and FY 1986. Reserve Components training loads for both the enlisted and officer corps continue to grow through FY 1986. DoD wide, the requirement to improve the technical skills of career personnel to keep pace with new equipment acquisition and modifications to the existing inventory will continue into the foreseeable future, and this is reflected in the Specialized Skill Training loads for FY 1986.

Specialized Skill Training loads for FY 1978-86 are as shown in Table V-1 on the following page.

Table V-1.--Specialized Skill Training Loads, FY 1978-86

Service / Component	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
Army a/ 1/									
Active	35,883	32,576	39,089	38,168	33,204	33,711	34,428	42,210	43,810
Reserve	3,563	2,514	3,677	5,064	4,500	4,305	4,683	8,150	9,762
Nat'l Guard	7,098	3,970	5,183	5,114	5,405	4,788	4,201	5,928	8,420
Navy									
Active	35,933	35,973	35,874	37,738	40,748	40,311	41,079	43,001	45,015
Reserve	546	467	469	535	556	635	1,110	1,782	1,800
Marine Corps									
Active	9,442	10,560 b/	7,624	8,527	8,361	9,024	9,795	9,730	11,050
Reserve	662	560	504	838	618	680	937	1,272	1,451
Air Force									
Active	22,629	20,167	21,445	23,310	22,899	22,453	20,345	22,110	22,221
Reserve	681	565	591	692	788	841	1,258	1,380	1,497
Nat'l Guard	1,040	912	1,031	1,256	1,181	1,401	1,338	1,624	1,790
DoD									
Active	103,887	99,273	104,032	107,743	105,212	105,499	105,647	117,051	122,096
Gd/Res Total	13,590	8,987	11,455	13,499	13,048	12,650	13,527	20,136	24,720
DoD Total	117,477	108,260	115,487	121,242	118,260	118,149	119,174	137,187	146,816

a/ Data do not include Army One-Station Unit Training loads.

b/ Prior to 1980, the Marine Corps training loads include Special Landing Forces Training operations. The data for FY 80-86 reflect only those training loads associated with training (Program 8) in the President's budget for FY 1986. The magnitude of the Special Landing Forces Training loads is about 2,500 per year.

As in the other types of training covered in this report, the demand placed on the training establishment for individuals with certain skills is determined by comparing projected requirements for each skill and skill level with the projected future inventory of trained service-members.

When anticipated losses are deducted from the current inventory, shortages in various skill areas are revealed. These shortages, except for those that can be satisfied through on-the-job training, or, in a few cases, through lateral entry from civilian life of individuals who already possess an employable skill, create a demand for a phased output of trained replacement personnel. Estimates are made of the portion of students in each training course who will fail to complete the course. These course attrition factors determine the inputs necessary to achieve the desired course outputs. Inputs, outputs, attrition patterns, and course lengths determine the training loads. These factors are discussed for each sub-category of Specialized Skill Training in the remainder of this chapter.

Specialized Skill Training is the most diverse of the major categories of individual training. In the interest of clarity, the full category has been divided into five sub-categories. Two are concerned with initial skill training, one for officers, the other for enlisted personnel; two others cover more advanced training, again divided by officer and enlisted. The last category covers both officer and enlisted training which, for the most part, imparts required knowledge or skills without changing the student's primary skill or skill level.

Initial Skill Training (Enlisted)

Initial Skill Training (Enlisted) includes all formal training normally given immediately after Recruit Training and leading toward the award of a military occupational specialty or rating at the lowest skill level. Successful completion of the training qualifies the enlisted member to take a position in the job structure of the Service and to progress, through job experience, to the journeyman level. Army One-Station Unit Training satisfies this same purpose but, because it combines the skill training with recruit training in a single course, it is treated separately in this report.

The great majority of Service recruits are drawn from the least skilled segment of the population. Most recruits are under age 21 and have little civilian job experience. In addition, some civilian specialties are not in demand in the military job structure, and many of the most important military skills have no civilian counterpart. Consequently, only a small number of people enter the Service with a skill that can be used with little or no additional training, and enlistees must be trained in a skill before they can become productive. Some skills can be acquired through experience and on-the-job training. Most, however, are most effectively and efficiently learned through

formal courses. In some situations, on board ship for example, the opportunity for on-the-job training is often limited.

Load data for Initial Skill Training (Enlisted) are displayed in Table V-2. The classification of this training is determined by its purpose, rather than by whether entrants attend immediately after Recruit Training. Thus some prior-service students and cross-trainees from other skill areas are reflected in these data.

Table V-2.--Training Inputs, Outputs, and Loads, Initial Skills Training (Enlisted), FY 1984 - 86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	16,409	18,085	98,212	89,630	18,356
Reserve	3,838	4,682	33,176	30,283	6,263
Nat'l Guard	3,283	4,315	29,674	27,442	6,337
Navy					
Active	22,205	22,813	172,045	159,619	24,488
Reserve	819	1,479	10,711	9,772	1,476
Marine Corps					
Active	7,300	6,507	46,034	43,155	7,483
Reserve	842	1,136	9,288	8,782	1,304
Air Force					
Active	13,241	14,596	64,348	58,880	14,773
Reserve	733	1,179	6,671	6,268	1,278
Nat'l Guard	1,001	1,231	6,365	5,739	1,442
DoD					
Active	59,155	62,001	380,639	351,284	65,100
Res/Gd Total	10,516	14,022	95,886	88,286	18,100
DoD Total	69,671	76,023	476,525	439,570	83,200

New mission requirements and technological change have resulted in consolidation or splitting skill areas and extensive modification of existing training programs. For instance, the introduction of microprocessors into Air Force duty sections of medical administration and operations resource management has increased the percentage of new accessions requiring formal training for these skills.

Reflecting the variety of skills required in the four Services, there are a large number of courses for enlisted personnel in Initial Skill Training, as shown in the following table.

Table V-3.--Number of Courses, Initial Skill Training (Enlisted), FY 1986

Army a/	Navy	Marine Corps	Air Force
576	171	83	380

a/ This does not include 41 courses that will be trained under OSUT.

Initial Skill courses include general skills, intelligence, cryptography, and health service training. Some of these courses are in highly technical skills, such as nuclear reactor specialist or electronics technician. Others involve less complex, but not less important, skills -- cook, clerk-typist, mechanic, and vehicle driver. A sampling of courses in each Service with the most students in FY 1986 is shown in the Table V-4.

Table V-4. Initial Skill Training Courses with High Student Flow, FY 1986

	No. of Students	Course Length (in weeks)
Army a/		
Light Weapons Infantryman	19,095	12.6
Cannon Crewman	10,779	13.0
Medical Specialist	8,996	10
Basic Military Police	7,570	15.6
Motor Transport Operator	4,312	7
Single Channel Radio Operator	4,182	13.2
Navy		
Basic Electricity/Electronics	22,551	8.4
Apprentice Training b/	21,663	4
Enlisted Basic Aviation Training	14,838	1.4
Propulsion Engineer Basic	6,709	3.7
Nuclear Power Basic	6,488	1.4
Avionics Technician "A" School	4,433	16.6
Basic Enlisted Submarine	3,911	5.6
Marine Corps		
Rifleman	4,292	5.4
Motor Vehicle Operator	3,257	5
Field Radio Operator	2,536	9
Basic Electronics	2,336	14
Basic Typing and Personnel Administration	1,960	2
Basic Automatic Mechanic	1,477	17
Air Force		
Security Specialist	4,955	6.4
Administrative Specialist	3,000	5.8
Inventory Management Specialist	2,469	5.6
Medical Svcs Specialist	2,175	9
Aircraft Maint (General)	1,860	7
Law Enforcement Specialist	1,849	6.6
Jet Engine Mechanic	1,469	8.4

a/ Many of the Army high-density skills and most combat skills (armor crewman, artilleryman, etc.) are trained through One-Station Unit Training (OSUT).

b/ Apprentice Training is composed of fundamental training in one of four basic skill areas: Seaman, Fireman, Airman, Constructionman. The course length shown is the average for those four skills.

Course lengths vary widely according to the complexity of the subject matter. For example, the Air Force course for cytotechnology specialists is 52 weeks long; whereas the course for social actions specialist is only 2 weeks long. Table V-5 shows the average course lengths for the Services' Enlisted Initial Skill Training.

Table V-5.--Average Course Lengths, Academic Days in Training (Enlisted), FY 1986

Army	Navy	Marine Corps	Air Force
50	70.1	56	57.5

The final determinant of training loads is the anticipated rate of attrition. Attrition rates must be estimated for each course. The rate may be negligible for a reasonably routine course for which students entered in the course have the necessary abilities and motivation. Attrition may run much higher, up to one-third of the class entrants, in technical subjects. In contrast to policies governing Recruit Training, many of the students who fail to complete these courses are retrained in other skills rather than discharged. The average anticipated rates for FY 1985 and FY 1986 are as shown below.

Table V-6.--Average Attrition Rates, Initial Skills Training (Enlisted), FY 1985 and FY 1986
(Percent)

	Army	Navy	Marine Corps	Air Force
FY 1985	8.7%	6.0%	5.0%	6.0%
FY 1986	8.5%	6.0%	6.0%	6.5%

Skill Progression Training (Enlisted)

This sub-category covers skill training received by enlisted personnel subsequent to Initial Skill Training. Through this training, the student gains the knowledge to perform at a more skilled level or in a supervisory position. Skill Progression Training is most frequently given after servicemembers have gained experience through actual work in their specialty. In some cases, however, training in a relatively narrow subject area as an immediate follow-on to Initial Skill Training is included in Skill Progression Training.

Training load data for Skill Progression Training (Enlisted) are shown in the following table.

Table V-7.--Training Inputs, Outputs, and Loads, Skill Progression Training (Enlisted), FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	2,929	3,618	17,352	16,576	4,064
Reserve	142	675	2,900	2,818	493
Nat'l Guard	118	483	2,168	2,108	398
Navy					
Active	12,332	13,065	120,880	116,763	13,260
Reserve	67	94	1,232	1,204	114
Marine Corps					
Active	677	1,317	9,323	8,983	1,472
Reserve	47	80	1,071	1,041	92
Air Force					
Active	5,581	5,780	74,898	72,982	5,763
Reserve	71	103	3,397	3,372	99
Nat'l Guard	237	265	4,883	4,785	239
DoD					
Active	21,519	23,780	222,453	215,304	24,559
Res/Gd Total	682	1,700	15,651	15,328	1,435
DoD Total	22,201	25,480	238,104	230,632	25,994

The requirement for Skill Progression Training arises from the fact that training in a skill at entry level and subsequent experience do not, in many cases, fully qualify servicemembers to do the most advanced jobs in their field without further formal training. Several factors may contribute, singly or in combination, to a need for additional formal training:

1. The introduction of new equipment.

2. The need to produce a higher degree of skill in a sub-specialty.

3. The need to impart a broader base of knowledge to qualify an individual for a supervisory responsibility.

4. The requirement for refresher training to bring the service-member up to date on the latest information and techniques in a skill.

The primary need, as in all other types of training, is to have trained individuals available to replace losses as they occur. Planning future training in this sub-category follows the same general pattern as for Initial Skill Training. Some additional complications, however, are introduced by the fact that members eligible for schooling are frequently serving overseas or on board ship, rather than flowing from the Recruit Training pipeline. This situation frequently requires that personnel receive the training when they are available, preferably between duty assignments, rather than when they might more easily be accommodated for formal school training.

The following table displays statistics in Skill Progression Training in each of the Services for FY 1986.

Table V-8.--Courses, Course Lengths, and Attrition, Skill Progression Training (Enlisted), FY 1986

	Army	Navy	Marine Corps	Air Force
Number of Courses	278	1,736	93	1,305
Average Course Lengths (Academic Days)	45	39.6	58	20
Projected Attrition Rate (Percent)	4.1%	3.2%	4%	*

*Less than 2%

The Air Force's average days in training is low compared to the other Services because of the large use of short courses. The large number of Navy and Air Force courses is a reflection of the technical nature of these Services and their large number of subspecialties. Of course, part of the difference is due to differing Service approaches to course definition and segmenting.

Initial Skill Training (Officer)

As a general rule, Officer Acquisition Training is oriented toward the broad educational background and general military training which is considered necessary for all officers entering a Service. In consequence, most newly commissioned officers require further training for the specific type of duty they will be performing in their first duty assignment. Initial Skill Training for officers is, therefore, analogous to Initial Skill Training for enlisted personnel -- both provide the job-oriented training which, added to the military fundamentals learned earlier, prepares the individual for taking a place in the job structure.

Load data for Initial Skill Training (Officer) are displayed in the following table.

Table V-9.--Training Inputs, Outputs, and Loads, Initial Skill Training (Officer), FY 1984-86

Service / Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	2,445	2,778	8,222	7,984	2,840
Reserve	376	1,689	6,749	6,557	2,001
Nat'l Guard	439	610	2,779	2,694	801
Navy					
Active	1,402	1,512	6,633	6,274	1,580
Reserve	18	23	1,785	1,779	24
Marine Corps					
Active	1,074	1,006	3,474	3,447	1,088
Reserve	5	4	105	105	4
Air Force					
Active	617	806	4,967	4,886	764
Reserve	391	31	587	583	43
Nat'l Guard	46	73	652	637	60
DoD					
Active	5,538	6,102	23,296	22,591	6,272
Res/Gd Total	1,275	2,430	12,657	12,355	2,933
DoD Total	6,813	8,532	35,953	34,946	9,205

With minor exceptions, all newly commissioned Army officers attend officer basic courses at their branch schools -- Infantry officers at the Infantry School, Engineer officers at the Engineer School, and so forth. These courses average 14 weeks in length, and officers attend before reporting to their first unit of assignment. In addition, certain officers are selected to attend follow-on skill or functional training courses for more specialized assignments.

All submarine and nuclear officers and most Surface Navy officers go to Initial Skill Training. The Navy provides 44 courses for officers in Initial Skill Training, with an average course length of 58 days.

All newly commissioned Marine Corps officers attend a basic course for general orientation and training. In addition, most Marine Corps officers attend one of the 15 Initial Skill Training courses sponsored by the Corps. They may also participate in others conducted by the Navy or other Services. Such courses average 63 days in length and are related to specific officer jobs.

The Air Force conducts 51 Initial Skill Training courses for officers, with an average length of 39 days. About 50 percent of newly commissioned officers attend these courses, some immediately after commissioning and others after spending some time at their first duty assignment.

Skill Progression Training (Officer)

Skill Progression Training for officers is, in general, aimed at officers with several years of practical experience and provides them knowledge needed to assume more advanced responsibilities. For example, the Army provides advanced courses which are structured to prepare the students for battalion and brigade staff duties in addition to command responsibilities at the company and battery level. Data for Skill Progression Training (Officer) are displayed in the following table.

Table V-10.--Training Inputs, Outputs, and Loads, Skill Progression Training (Officer), FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	3,578	4,302	15,383	15,162	4,450
Reserve	142	374	3,962	3,904	427
Nat'l Guard	171	242	2,140	2,080	371
Navy					
Active	1,004	1,124	8,526	8,233	1,148
Reserve	15	14	348	340	14
Marine Corps					
Active	186	226	2,487	2,441	249
Reserve	6	7	253	193	7
Air Force					
Active	604	636	12,777	12,658	617
Reserve	48	54	1,026	1,003	53
Nat'l Guard	35	36	966	941	30
DoD					
Active	5,372	6,288	39,173	38,494	6,464
Res/Gd Total	417	727	8,695	8,461	902
DoD Total	5,789	7,015	47,868	46,955	7,366

The Army conducts 172 courses averaging 63 days in length. The Navy maintains 185 courses, averaging 33 days in length, which cover a variety of specialized duties that are typically performed by officers with several years of service -- for example, destroyer officer course, aviation maintenance officer course, and nuclear propulsion plant course.

Both the Marine Corps and the Air Force conduct broad courses for officers at about the same level as the Army's advanced courses; however, as these are Service-wide and uniform in content, they are carried in Professional Development Education. Within Skill Progression Training, Marine Corps officers attend 34 courses sponsored by the Corps. They also utilize the course offerings of the other Services. The Air Force has 1151 courses, averaging 12 academic days each, for the purpose of training officers in new duties required by their prospective assignments.

Attrition from the Skill Progession courses for officers is significantly lower than for enlisted training or initial skill officer training. Attrition of one to two percent is typical of such courses.

Functional Training (Officer and Enlisted)

Functional Training is an "all other" sub-category covering those types of required training that do not fit neatly into the definitions of the other sub-categories. By and large, Functional Training is in subject areas that cut across the scope of military occupational specialties and provides additional required skills without changing the student's primary speciality or skill level. An example is a Damage Control Course conducted by the Navy. Both officers and enlisted personnel participate in Functional Training. Load data for Functional Training are shown in the Table V-11.

Table V-11.--Training Inputs, Outputs, and Loads, Functional Training (Officer and Enlisted), FY 1984 - 86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	9,067	13,427	117,232	106,053	14,100
Reserve	185	730	5,403	5,175	578
Nat'l Guard	190	278	4,929	4,635	513
Navy					
Active	4,136	4,487	409,297	395,399	4,539
Reserve	191	172	12,463	12,270	172
Marine Corps					
Active	558	674	9,065	7,624	758
Reserve	37	45	1,039	999	44
Air Force					
Active	302	292	10,461	10,344	304
Reserve	15	13	928	919	24
Natl Guard	19	19	806	802	19
DoD					
Active	14,063	18,880	546,055	519,420	19,701
Res/Gd Total	637	1,257	25,568	24,800	1,350
DoD Total	14,700	20,137	571,623	544,220	21,051

Army Functional Training includes the airborne, ranger, and special forces qualification courses, many specialized NCO supervision courses, language training, and a number of courses related to specialized equipment (e.g., Satellite Communication Operation and Maintenance; 8-inch Atomic Projectile Assembly).

Navy Functional Training differs from that of the other Services because of the very high input to a large number of very short courses. Most of the training consists of in-port training for ships' crews, and includes the following types of activity:

1. Shore training for shipboard teams (firefighting, damage control, anti-submarine warfare, and so forth).

2. Short basic or refresher courses at fleet training centers in the operation of equipment or systems.

3. Shipboard in-port training assistance.

4. Precommissioning training for newly formed crews of ships under construction.

Marine Corps Functional Training provides skills required for specific jobs but not limited to a primary occupational specialty. Some of the included courses are scuba training, sea duty indoctrination, and drill instructor training.

All Air Force Functional Training is survival training related to various environments: water, arctic, jungle, or tropic. These courses train air crews the skills for long-term combat survival and survival in chemical, biological, and radiological contaminated environments.

The following table provides additional statistics on Functional Training.

Table V-12.--Courses and Course Length, Functional Training, FY 1986

	Army	Navy	Marine Corps	Air Force
Number of Courses	1,424	1,018	33	8
Average Course Length (Days)	25	4	25	8

VI

FLIGHT TRAINING

General Description

Flight Training programs provide basic flying skills required prior to operational assignment of pilots, navigators, and naval flight officers. Most of the training in this category is undergraduate flight training; at the conclusion of this training, a graduate is awarded "wings" and is classified as a "designated" or "rated" officer. Flight Training includes programs for pilots of all Services, navigators in the Air Force, and naval flight officers in the Navy and Marine Corps. Pilot training may be in jet or propeller-driven fixed-wing aircraft, or in helicopters. Some related advanced flight training, such as Army instructor pilot training and Air Force navigator/bombardier and electronic warfare training, is also included in Flight Training. Enlisted programs in aviation-related subjects (for example, in air traffic control) and Air Force survival training are in Specialized Skill Training. Marine Corps enlisted navigator training is included in Flight Training.

Flight Training loads, by Service and component, for Fiscal Years 1978 through 1986 are shown in Table VI-1.

Table VI-1.--Total Flight Training Loads, FY 1978-86

Service	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
Component									
Army									
Active	724	813	1,204	1,204	1,197	1,455	1,128	1,223	1,265
Reserve	42	49	31	87	46	50	68	72	108
Natl Guard	72	89	80	44	86	206	203	232	232
Navy									
Active	1,287	1,065	1,253	1,614	1,993	1,712	1,635	1,883	1.960
Marine Corps									
Active	692	859	790	692	676	647	759	599	527
Air Force									
Active	1,723	2,025	2,467	2,688	3,117	3,170	3,001	2,862	2.806
Reserve	34	37	51	161	52	63	56	89	85
Natl Guard	94	128	128	61	244	234	193	251	240
DoD									
Active	4,426	4,762	5,714	6,198	6,983	6,984	6,523	6,567	6,558
Res/Gd Tot	177	242	303	353	428	553	520	644	665
DoD Total	4,668	5,065	6,004	6,551	7,411	7,537	7,043	7,211	7,223

Flight Training loads were reduced by approximately 45 percent over the period FY 1975 to FY 1978 because of the net effect of the following factors:

- Peacetime reductions in active force aviator requirements in all Services, except for moderate increases in Army aviator requirements associated with the 16-division force objective in the last years.

- Restriction of undergraduate flight training for Reserve Component members to the number needed to fill positions in reserve aviation units that could not be filled through recruitment of experienced aviators leaving active duty -- as, for example, positions in aviation units that are remote from major population centers.

The Service trends for flight training in FY 1986 call for maintaining the generally higher rates of training initiated in FY 1979. However, the Air Force is making some reductions due to the pilot and navigator inventories approaching balance while retention continues at high levels. The higher rates reflect an ongoing effort to return pilot and navigator inventories to long-term sustainable levels, levels which in the late 1970s were adversely affected by several years of unexpectedly high attrition rates for flying personnel. More undergraduate helicopter pilot training for the Army's reserve components is planned. This will increase the Army's reserve pilot inventories and increase the deployability of reserve air detachments.

For purposes of clarity, the following discussion of aviation training is divided into three sections -- Undergraduate Pilot Training, Navigator Training, and All Other Flight Training, each treating a subcategory of Flight Training.

Undergraduate Pilot Training

Undergraduate Pilot Training qualifies students to perform the basic flight duties and to assume the responsibilities of military pilots. Air Force courses include sufficient flying training to allow the student to attain proficiency in the general class of aircraft (fixed wing or rotary wing) flown in future assignments. Flying and simulator training is augmented by flight-related ground training. Officer professional development training prepares students for the responsibilities of a junior officer. The Army uses a large number of warrant officer pilots. Enlisted entrants undergo warrant officer candidate training before entering flight phases of training, and receive their warrants upon graduation from flight training. A few Army flight training students are already commissioned officers upon entry. The Navy conducts officer training for naval aviation officer candidates concurrent with the early phases of flight training.

Training data for FY 1984-86 are displayed in the following table.

Table VI-2.--Training Inputs, Outputs, and Loads, Undergraduate Pilot Training, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	896	921	1,348	1,184	921
Reserve	61	49	126	107	85
Natl Guard	159	163	243	209	164
Navy					
Active	1,017	1,230	1,608	963	1,303
Marine Corps					
Active	720	549	431	335	477
Air Force					
Active	2,031	1,901	2,330	1,800	1,876
Reserve	46	71	75	65	65
Natl Guard	137	166	190	155	159
DoD					
Active	4,664	4,601	5,717	4,282	4,577
Res/Gd Tot	403	449	634	536	473
DoD Total	5,067	5,050	6,351	4,818	5,050

Load data for each Service for undergraduate helicopter pilot training are shown in Table VI-3.

Table VI-3.-- Training Inputs, Outputs, and Loads, Undergraduate Helicopter Pilot Training, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	896	921	1,348	1,184	921
Reserve	61	49	126	107	85
Natl Guard	159	163	243	209	164
Navy					
Active	271	338	494	300	374
Marine Corps					
Active	315	295	273	220	260
Air Force					
Active	62	68	111	100	79
Natl Guard	0	3	3	3	3
DoD					
Active	1,544	1,622	2,226	1,804	1,634
Gd/Res Total	220	215	372	319	252
DoD Total	1,764	1,837	2,598	2,123	1,886

The following table shows programmed course lengths and projected attrition rates for the Army undergraduate helicopter pilot training program.

Table VI-4.-- Course Lengths and Attrition Rates, Army Undergraduate Helicopter Pilot Training, FY 1986

	Commissioned Officers	Warrant Officer Candidates	
		Officer Training	Flight
Course Length (weeks)	36.4	6.8	36.4
Attrition Rate	7%	13%	16%

The Army course is 6-8 weeks longer for warrant officer candidates than for commissioned officers, since the course also serves as a warrant officer candidate school.

Navy Undergraduate Pilot Training begins with a common core of basic ground training and primary flight training and then diverges according to whether the student is to be qualified in jet aircraft, propeller aircraft

or helicopters. The basic ground phase, or environmental indoctrination phase, is fourteen weeks in length for officer students and 20 weeks for aviation officer candidates, since this phase also serves as an officer training period for the latter group.

The following table shows course lengths, attrition rates, and type of aircraft used for training for each phase of the syllabus:

Table VI-5.--Course Phasing, Navy/Marine Corps Undergraduate Pilot Training, FY 1986

Course/Phase	Course Length (Weeks)	Attrition Rate (Percent) NAVY	Attrition Rate (Percent) USMC	Type Aircraft
Commissioned Officers				
Aviation Pre-flight Indoctrination	6	9	2	-
Aviation Officer Candidates	14	15	NA	-
Primary Training (Jet, Prop, Helo)	22	13	13	T-34C
Strike Training (Jet)				
Intermediate	25	6	6	T-2C
Advanced	20.5	8	8	TA-4J
Maritime Training (Prop)				
Intermediate	5.2	1	1	T-34C
Advanced	18.4	7	7	T-44A
E-2/C-2/C-1 Training				
Intermediate	2.8	1	1	T-34C
Intermediate Jet (CQ)	21.6	6	-	T-2C
Advanced Maritime	5.6	1	-	T-44A
Helicopter Training				
Intermediate	5.2	1		T34C
Transition	7.6	1.5		TH57A
Advanced	14.6	2		TH57

Because of the task requirements which dictate variations in course content, the standard Undergraduate Pilot Training course is as short as 55 weeks for an officer student qualifying in helicopters or as long as 82 weeks for an aviation officer candidate qualifying in jets. Actual course duration may be longer because of unforeseen circumstances such as major aircraft groundings, fuel shortages, or inclement weather.

The changes in duration for various phases of Undergraduate Pilot Training are the result of full implementation of the Navy Integrated Flight Training System (NIFTS).

The following table displays load data for Navy and Marine Corps Undergraduate Pilot Training. All participants are in the active force.

Table VI-6.--Training Inputs, Outputs, and Loads, Navy/Marine Corps Undergraduate Pilot Training, FY 1984-86

Service	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Navy					
Strike	383	543	560	355	577
Maritime	363	349	554	308	352
Helo	271	338	494	300	374
Marine Corps					
Jet	365	235	145	105	205
Prop	40	19	13	10	12
Helo	315	295	273	220	260

The final program of Undergraduate Pilot Training is training of Air Force fixed wing jet pilots. Air Force helicopter pilots are trained in the Army program. The majority of Air Force fixed wing pilots are trained in the all-jet USAF Undergraduate Pilot Training program. The standard course length is 49 weeks. Forecast attrition for FY 1986 is 22.7 percent, not including flight screening programs.

In addition, approximately 110 Air Force pilots will be trained annually in the EURO-NATO Joint Jet Pilot Training (ENJJPT) program. ENJJPT is a cooperative undergraduate pilot and pilot instructor training program that began operation on 1 October 1981 at Sheppard Air Force Base, Texas. It is the most significant project of its type that has been undertaken among Allies during peacetime. The nations involved in the program are Belgium, Canada, Denmark, Germany, Greece, Italy, Netherlands, Norway, Portugal, Turkey, United Kingdom, and the United States. ENJJPT is based on the principles of proportionate sharing of program costs and proportionate instructor pilot manning. Forecast attrition for the program is 16.7 percent and the course length is 55 weeks.

Load data for both standard Air Force pilot training and ENJJPT are shown in Table VI-7.

Table VI-7.--Training Inputs, Outputs, and Loads, Air Force Undergraduate Jet Pilot Training, FY 1984-86

	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Active	1,969	1,833	2,219	1,700	1,797
Reserve	46	71	75	65	65
Natl Guard	137	163	187	152	156
Total	2,152	2,067	2,481	1,917	2,018

At the conclusion of Undergraduate Pilot Training, the new pilot is capable of operating an aircraft in such a manner that future training requirements, in order to accomplish a specific mission, are limited to advanced flight training in aircraft used in operational units and training in the employment of applicable mission weapon systems.

Undergraduate Navigator Training

The Navy trains Navy and Marine Corps personnel to become Naval Flight Officers. The Air Force trains its personnel as navigators. The duties of Naval Flight Officers and Air Force navigators are not precisely the same because of mission differences. But at the undergraduate level, they are sufficiently similar that they are referred to collectively in this report as "navigators" (The Army does not train or use navigators).

The Undergraduate Naval Flight Officer (NFO) training program is a building block training program. The training commences with Aviation Pre-flight Indoctrination (6 weeks for officers) or Aviation Officer Candidate Training (14 weeks for officer candidates) where the student is provided basic aeronautical and aviation physiological foundation knowledge. After completing this phase, the student enters the Basic phase. This 15 week course provides the student with the basic skills and knowledge needed to safely navigate, communicate, manage aircraft systems, and to describe two-plane formation maneuvers. Successful completion of Basic qualifies students for entrance into Interservice Undergraduate Navigation Training (22 weeks) conducted at Mather AFB, California (described in a later paragraph), or the Navy Intermediate Phase. The Intermediate Phase (13 weeks) expands the knowledge gained in Basic and requires higher skill and performance standards. Practical flight skills are developed in the ID-23 Computerized Navigation/ Communications Training Device; the 2B37 T-34C Simulator; the 2F101 T-2 Simulators; the T-2B aircraft for jet acclimatization and high speed navigation the T-47A aircraft for jet instrument navigation, and the T-34C aircraft for formation visual navigation, instrument navigation, and advanced performance maneuvers. After successful attainment of the performance standards, the students proceed to one of the following advanced Naval Flight Officer Training phases which provide specific skills and knowledge: Radar Intercept Officer (RIO) (19 weeks), Tactical Navigation (TN) (15 weeks), Overwater Jet Navigation (OJN) (15 weeks), and Airborne Tactical Data Systems (ATDS) (15 weeks).

The advanced segment of Undergraduate Navigator Training for Naval Flight Officers destined for the Anti-submarine Warfare Community is now managed by the Naval Air Training Unit (NAVAIRTU) at Mather AFB. Navigator candiates receive 331 hours of academic instruction, 72 hours of simulator training and 80 hours of flight instruction in the T-43 aircraft during 22 weeks of training. This training provides sufficient skills and knowledge so that further training for the newly rated navigator can be limited to flight training in operational aircraft and training in employment of applicable weapons systems.

NFO training achieved T-34 aircraft full training capability in the Basic and Intermediate phases in FY 1984. This aircraft allows for increased hands on training. The T-47A will be introduced to NFO training and achieve training capability in VT-10 Intermediate, RIO, TN and OJN in FY-85. T-47A full training capability should be achieved in FY-86. The T-47A replaces the T-39D aircraft.

The Air Force program consists of a 28 week basic course that includes 395 hours of academic instruction, 68 hours of flight simulator training, 68 hours of actual flight instruction in the T-43 aircraft, and 7.8 hours in the T-37 aircraft. After the basic course, a bomber, tanker, or cargo aircraft assignee continues training in the four-week Advanced Navigator Course which provides 74 academic hours, 20 simulator hours, and 20 flying hours in the T-43. A fighter or reconnaissance aircraft assignee receives an additional 78 academic hours, 12 simulator hours, and 11.7 flying hours in the T-37 while attending the five-week Tactical Navigator Course.

The advanced segment of Undergraduate Navigator Training for Naval Flight Officers destined for the anti-submarine warfare community was merged into the Air Force program at Mather Air Force Base in California in 1976. In this program, Naval Flight Officers receive 321 hours of academic instruction, 76 hours of simulator training and 80 hours of flight instruction in the T-43 aircraft during 22 weeks of training.

Undergraduate Navigator Training provides sufficient skills and knowledge so that further training for the newly rated navigator can be limited to advanced flight training in operational aircraft and training in employment of applicable weapon systems. Training load data for Undergraduate Navigator Training are shown in the following table.

Table VI-8. Training Inputs, Outputs, and Loads, Undergraduate Navigator Training, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Navy					
Active	514	520	832	499	524
Marine Corps					
Active	39	50	62	46	50
Air Force					
Active	496	440	887	700	440
Reserve	8	12	28	20	14
Natl Guard	45	62	120	95	60
DoD					
Active	1,049	1,010	1,781	1,245	1,014
Res/Gd Tot	53	74	148	115	74
DoD Total	1,102	1,084	1,929	1,360	1,088

Other Flight Training

This category covers miscellaneous types of flight training, including advanced flight training, flight familiarization, and other flight programs, which were not previously included in undergraduate pilot or navigator training. Load data are displayed in Table VI-9.

Table VI-9.--Training Inputs, Outputs, and Loads, Advanced, Familiarization, and Other Flight Training, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	232	302	2,805	2,745	344
Reserve	7	23	210	202	23
Natl Guard	44	69	480	462	68
Navy					
Active	104	133	3,381	3,381	133
Air Force					
Active	474	521	3,950	3,718	490
Reserve	2	6	40	37	6
Natl Guard	11	23	249	210	21
DoD					
Active	810	956	10,136	9,844	967
Res/Gd Total	64	121	979	911	118
DoD Total	874	1,077	11,115	10,755	1,085

The Army includes in this category courses for instructor pilots and specific pilot qualification courses in various aircraft. Most of the courses are short, in the range of two to seven weeks.

The Air Force conducts a separate 22-day flight screening program for candidates for Undergraduate Pilot Training who have not had previous flight familiarization training. The resulting student loads are included in Other Flight Training. Similar training is provided to most Air Force Academy cadets, some Air Force ROTC cadets, and a limited number of cadets and midshipmen from the Military and Naval Academies. The associated workload is included in the Service Academy loads and in ROTC enrollment figures.

The Navy and Marine Corps do not report training in this category since postgraduate flight training is conducted under operational command auspices and Navy Flight Familiarization is conducted as a component of Officer Acquisition Training (see Chapter IV).

The Air Force Other Flight Training workload is limited largely to instructor courses for pilots and navigators and some specialized courses conducted by the Air Training Command in such fields as electronic warfare. Most Air Force postgraduate flight training is conducted under operational command auspices.

In each of the Services, graduates of undergraduate pilot and undergraduate navigator training receive supplementary training in the specific aircraft they will be flying on operational missions. Emphasis is placed on crew training and performance under conditions that would be encountered in combat. In the Army most of this training is provided as part of normal unit training by the operational unit to which the new pilot is assigned. In the other Services, this additional training is provided by Navy fleet readiness squadrons, Marine combat crew readiness training squadrons, and Air Force combat crew training squadrons. As an exception, centrally conducted Army advanced flight training loads are included within Other Flight Training loads. However, most such training is classified as "crew and unit training" by the Navy, Marine Corps and Air Force and is not included in the loads of this report.

Determination of Requirements for Rated Officers

Flight Training rates are developed by comparing projections of future requirements for rated officers with projections of the future status of inventories of both reserve and active duty rated officers. Consideration is given to the need to have sufficient active duty aviators on hand, in appropriate grades. Requirements for rated officers include both the numbers needed to man the force in peacetime and the additional increment needed to man and sustain the force when war breaks out. For analytical purposes, aviator requirements are divided into two parts: unit and individuals. Requirements for aviators for each of these categories are computed to meet both peacetime needs and wartime mobilization needs.

Unit requirements represent the number of rated officers needed to carry out operational, training, and management activities for programmed units. Each such authorized position (that is, military space or billet) requires a rated officer as an incumbent in order to carry out the functions of the job, either because the job involves flying duties (i.e., "operational flying" positions as defined for purposes of the Aviation Career Incentive Act of 1974) or requires flying experience. Other positions that may be occupied by rated officers for career broadening or similar purposes, but that do not require rated officer incumbents for accomplishing the duties, are not included. Unit requirements have three subcomponents: force, training, and supervision.

Force requirements are the positions required to man and operate the Services' force aircraft. The number of force positions is a product of established crew ratios, or the number of crews per aircraft, which in turn take into account workload (flying hour) and readiness factors and the amount of mission flying and unit flight training that is necessary.

Training positions include the flyers who are conducting formal flight training.

The supervision component is made up of officer positions entailing actual supervision of flying and flight-related activities and the performance of staff jobs which require the expertise of a rated officer. These positions are subject to continuous scrutiny to assure that rated requirements are valid.

Individual requirements include the transients, students and other individuals needed to make it possible to provide for reasonable manning of positions in units.

Rated Officer Inventory Projections

Projecting rated officer inventories into the future must be based on historical experience, current judgment, and an appraisal of how the officers will react to conditions in the future (for example: pay, morale, state of the civilian economy, civilian airline hiring plans, and family satisfaction with service life). These estimates are projected for at least five years in the future. Comparisons of total force inventories of rated officers are then made against the computed total force requirements, and training rates for the entire five-year period are adjusted. This process is repeated each year so that adjustments can be made in training rates based on changes in requirements and/or updated inventory projections. This continuing process of adjustment is necessary to insure that the correct number of trained rated officers will be available in the future without large and expensive fluctuations in training rates.

Training Rate Adjustments

When a comparison of requirements and inventories discloses a shortage or overage of projected rated officers, training rates are adjusted upward or downward in order to bring the program back into balance. For example, if projected FY 1991 pilot requirements exceed projected inventories by 1,000, an increase in training rates (that is, output or production) of pilots of 200 per year starting in FY 1987 may be appropriate. Inputs into the training program would start in FY 1986 in order to obtain the first increase in desired output in FY 1987. This reevaluation process is repeated at least once each year, with adjustments made as necessary to avoid wide fluctuations in loads.

Determination of Training Loads

The process described above, through continuous updating of the comparison between projected rated officer requirements and inventories, leads to a requirement for phased output from the flight training establishment. The desired annual output, considering the anticipated attrition rates and the planned course lengths, as discussed in the preceding sections on the various types of flight training, establishes the size of the input necessary to achieve the target output. Training loads are then calculated, using these factors, to determine the average number of students to be on hand during the training year. For FY 1986, the currently recommended loads are those displayed previously in this chapter.

VII

PROFESSIONAL DEVELOPMENT EDUCATION

General Description

The purpose of Professional Development Education is to provide training and education to career military personnel to prepare them to perform the increasingly complex tasks that become their responsibilities as they progress in their military careers. Whereas Specialized Skill Training is directed toward specific job skills, Professional Development Education is concerned with broader professional development goals in such subjects as military science, engineering, medicine, and management. Professional Development Education is conducted at both military and civilian institutions. This category includes senior enlisted leadership training in recognition of the broad professional content of these courses, as opposed to the narrower skill-oriented training typical of most enlisted training programs. However, most of the programs in this category are for professional development of officers.

Training loads for FY 1978-86 are as shown in Table VII-1.

Table VII-1.--Professional Development Education Training Loads, FY 1978-86

Service Component	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
Army									
Active	3,374	3,109	2,402	2,614	2,587	2,797	2,997	3,361	3,446
Reserve	60	45	56	58	62	47	89	78	87
Natl Guard	89	55	53	55	54	52	57	58	55
Navy									
Active	1,616	1,556	1,582	1,686	1,486	1,727	1,847	1,993	2,104
Reserve	15	3	10	16	39	25	37	31	42
Marine Corps									
Active	728	637	647	654	672	696	782	816	838
Reserve	16	15	14	12	18	30	19	31	32
Air Force									
Active	3,520	3,222	3,191	3,284	3,480	3,995	4,234	4,074	3,914
Reserve	39	35	44	40	83	81	68	77	79
Natl Guard	36	36	38	47	42	38	41	43	44
DoD									
Active	9,238	8,524	7,822	8,074	8,225	9,215	9,860	10,244	10,302
Res/Gd Total	255	189	215	228	298	273	311	318	339
DoD Total	9,493	8,713	8,037	8,466	8,523	9,488	10,171	10,562	10,641

The total loads in the table show a considerable disparity among the Services in amounts of Professional Development Education. This disparity is more apparent than real, and is related mainly to somewhat different ways of categorizing Service education programs.

The first three subcategories of Professional Development Education are officer professional military development programs. These programs are at three levels: initial, intermediate, and senior.

Education in the military school system is fundamental to the development of military officers who are fully qualified to perform duties of high responsibility in both war and peace. In most non-military professions, growth in ability and knowledge is gained through experience. In the military, opportunities for full practice of the profession are limited to wartime, and even those officers with combat experience have not had the opportunity for thorough exercise of the decision skills they would require, for example, in a war in the Middle East. The military school system serves partially to fill this shortfall by educating military officers in the skills and knowledge needed to perform their duties in a variety of locales and situations, both in peacetime and wartime.

In addition to their regular courses for active force officers, most schools in this category present nonresident courses and short seminars. Large numbers of Reserve Component officers and other military students are provided instruction through correspondence courses.

Career Officer Professional Schools

The Marine Corps and Air Force conduct career officer professional courses for officers with some experience in operational units. These courses are Service-wide in scope and are, therefore, carried in this report under Professional Development Education. The Army and Navy conduct courses that are at a similar level, but that are oriented toward specific skills (e.g., the Navy's Surface Warfare Officers Course) or somewhat broader skills within a specific part of the Service (e.g., the Army's Armor Officer Advanced Course). The Army and Navy courses, because of their specialization, are treated in this report as part of Specialized Skill Training.

The Marine Corps Amphibious Warfare School prepares officers in the grade of captain for duties in battalion or squadron command or on regimental-level staffs. The course length is 39 weeks. The Air Force Squadron Officer School is an 8-week course designed to prepare selected captains, after completion of some active service experience, for command and staff duties appropriate to their grade.

The training load data for FY 1984-86 associated with these Marine and Air Force courses are displayed in the Table VII-2.

Table VII-2.--Career Training Inputs, Outputs, and Loads, Officers Professional Schools, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Marine Corps					
Active	127	124	170	170	124
Reserve	6	10	260	260	10
Air Force					
Active	609	625	3,868	3,868	625
Reserve	1	2	10	10	2
Natl Guard	4	4	26	26	4
DoD					
Active	736	749	4,038	4,038	749
Res/Gd Total	11	16	296	296	16
DoD Total	747	765	4,334	4,334	765

Intermediate Service Schools

Each of the Services maintains a Command and Staff College. In addition, the Navy is executive agent for the Armed Forces Staff College, a joint institution sponsored by the Joint Chiefs of Staff with students from all Services. While there are differences in approach and curriculum based on the requirements of the parent Service, each of the courses is designed to prepare officers for command and staff duties in all echelons of their parent Services and in joint or allied commands. A relatively small number of officers from each Service attends one of the Command and Staff Colleges of the other Services; a few attend Allied schools at the same level. Attendance at the Intermediate Service Schools is on a selective basis. The following table lists the Command and Staff Colleges and their respective course lengths.

Table VII-3.--Intermediate Service School

Schools	Location	Course Length (Weeks)
Armed Forces Staff College	Norfolk, VA	22
Army Command and General Staff College	Fort Leavenworth, KA	42
College of Naval Command and Staff	Newport, RI	44
Marine Corps Command and Staff College	Quantico, VA	43
Air Command And Staff College	Montgomery, AL	43

Another school categorized as an Intermediate Service School for purposes of this reports is the Defense Systems Management College at Fort Belvoir, Virginia. This is a joint school that conducts a primary 20-week course in management concepts and methods with the major purpose of preparing selected military officers and DoD civilian personnel for assignments in program or project management.

Load data for military personnel attending Intermediate Service Schools is shown in the following table:

Table VII-4. Training Inputs, Outputs, and Loads, Intermediate Service Schools, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	702	709	2,253	2,253	703
Reserve	26	29	522	520	38
Natl Guard	31	33	331	328	31
Navy					
Active	172	173	2,066	2,066	183
Reserve	18	14	539	539	19
Marine Corps					
Active	143	155	211	211	155
Reserve	8	10	237	237	10
Air Force					
Active	472	471	606	607	469
Reserve	14	15	200	200	16
Natl Guard	14	14	142	142	14
DoD					
Active	1,489	1,508	5,136	5,137	1,510
Res/Gd Tot.	111	115	1,971	1,966	128
DoD Total	1,600	1,623	7,107	7,103	1,638

Senior Service Colleges

Each of the Military Departments maintains a Senior Service College, or "War College." In addition, there is the National Defense University, consisting of two joint Senior Service Colleges, The National War College and the Industrial College of the Armed Forces, which are attended by students from all four Services. Senior Service College attendance is on a highly selective basis; students are chosen by Service selection boards from among the most promising officers in the lieutenant colonel/colonel, commander/captain grades.

The common purpose of the Senior Service Colleges is to prepare students for senior command and staff positions at the highest levels in the national security establishment and the allied command structure. The unifying focus is the study of national goals and national security

policy. Each of the Service colleges, while concentrating on the employment of the parent Service in the defense mission, also includes the study of the employment of the forces of other Services.

All of the colleges integrate the study of economic, scientific, political, sociological, and other factors into the consideration of national security problems. The Industrial College, in its approach to national security problems, emphasizes the use and management of national resources. The length of the principal courses at the Senior Service Colleges is ten months. Most colleges also conduct shorter special-purpose seminar-type courses, some particularly for Reserve Component officers. Use of these short courses is greatest in the Navy.

Load data for the Senior Service Colleges are shown in the following table.

Table VII-5.--Training Inputs, Outputs, and Loads, Senior Service Colleges, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	229	249	439	439	267
Reserve	16	16	115	115	17
Natl Guard	13	13	77	77	14
Navy					
Active	121	116	1,344	1,344	127
Reserve	16	11	479	479	17
Marine Corps					
Active	49	53	66	66	52
Reserve	1	6	151	151	7
Air Force					
Active	250	249	283	283	248
Reserve	6	6	79	79	6
Natl Guard	6	6	79	79	6
DoD					
Active	649	667	2,132	2,132	694
Res/Gd Tot.	58	58	980	980	67
DoD Total	707	725	3,112	3,112	761

Enlisted Leadership Training

The courses included in this category are designed to provide selected senior enlisted personnel the skills and knowledge needed to assume the responsibilities of the highest noncommissioned officer grades. These courses are the culmination of formal enlisted training

and are, for enlisted personnel, analogous to the officer courses discussed in the preceding sections. In addition to such subjects as methods of leadership, human relations, discipline and training, and the administration and employment of military organizations, the senior noncommissioned officers, in these higher-level schools, are given a broader perspective of the role and functions of their Services. Schools, locations and course lengths are shown in Table VII-6.

Table VII-6.--Enlisted Leadership Training Course

Schools	Location	Course Length (Weeks)
Army: Sergeants Major Academy	Fort Bliss, TX	22
Navy: Senior Enlisted Academy	Newport, R.I.	9
Marine Corps: Staff NCO Academy (Advanced Course)	Quantico, VA	10
Staff NCO Academy (Career Course)	Quantico, VA	6
	Camp Lejeune, NC	6
	El Toro, CA	6
Air Force: Senior NCO Academy	Gunter AFB, AL	9

Other enlisted leadership training for more junior noncommissioned officers is carried in Specialized Skill Training. This includes command-sponsored NCO academies, for example. This training tends to be more skill related for specific types of specialized leadership responsibilities. The senior enlisted leadership training carried in this chapter is more properly thought of as Professional Development Education in a broader sense.

All four Military Services now sponsor a Senior Enlisted Leadership Academy. The Navy has the newest of the academies; the Navy's Senior Enlisted Academy at Newport, R.I. was opened for 16 entrants in FY 1981. An enrollment of 275 senior enlisted personnel is planned for FY 1986.

Training loads for enlisted leadership training for FY 1984-86 are shown in Table VII-7.

Table VII-7.--Training Inputs, Outputs, and Loads, Enlisted Leadership Training, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	197	279	852	841	274
Reserve	7	7	24	23	6
Natl Guard	8	8	24	23	6
Navy					
Active	39	42	245	245	42
Reserve	2	5	30	30	5
Marine Corps					
Active	234	228	1,832	1,803	228
Reserve	4	5	123	123	5
Air Force					
Active	182	186	1,180	1,180	186
Reserve	2	2	15	15	2
Natl Guard	5	5	30	30	5
DoD					
Active	652	735	4,109	4,069	730
Res/Gd Total	28	32	246	244	29
DoD Total	680	767	4,355	4,313	759

Graduate Education Fully Funded, Full Time

The Department of Defense needs military officers with specialized advanced knowledge, at a level attainable only through graduate education, to perform effectively in certain military jobs. The purpose of the graduate education program in each of the Services is to provide graduate-level education in required disciplines to the numbers of officers required to maintain an inventory of officers qualified to fill these jobs. Under the program described in this section, military officers undergo graduate education on a full time, fully funded basis. An active service payback obligation of two years of service for each year of schooling is required of all officers entering the program, up to a maximum set by the Services. (The Funded Legal Education program established by 10 USC 2004 requires an active service commitment of two-for-one.)

The following table displays training load data for these graduate education programs. All participants are members of the Active Forces.

Table VII-8.--Training Inputs, Outputs, and Loads, Graduate Education, Fully Funded, Full Time, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army	931	1,107	732	732	1,161
Navy					
Active	1,160	1,240	748	751	1,279
Marine Corps					
Active	100	127	82	79	147
Air Force					
Active	1,297	1,332	780	821	1,270
DoD Total	3,488	3,806	2,342	2,383	3,857

Officer graduate students attend either a civilian educational institution or one of the two Service institutions, the Naval Postgraduate School or the Air Force Institute of Technology, depending upon where the required education can best be obtained. Curricula in the two service institutions emphasize military-unique courses, such as in logistics management or intelligence operations, and military applications in all other courses. While these schools are primarily used by the parent Services (including Marine Corps use of the Naval Postgraduate School), they also educate some students from other Services. The numbers of Navy and Air Force officers enrolled in advanced degree and short course programs reflects a five-year plan developed by the Services to improve the advanced technological and engineering capabilities of the career force. The plan incorporates greater utilization of the Naval Postgraduate School and the Air Force Institute of Technology. The following table displays student loads for these two schools.

Table VII-9.--Graduate Education Loads at Service Institutions, FY 1984-86

	Naval Postgraduate School			Air Force Institute of Technology		
	FY 84 Load	FY 85 Load	FY 86 Load	FY 84 Load	FY 85 Load	FY 86 Load
Army	129	131	135	19	24	38
Navy	982	1,630	1,740	21	12	12
Marine Corps	70	103	123	4	2	3
Air Force	82	75	76	856	902	824
Total DoD	1,263	1,939	2,074	900	940	877

Requirements for graduate-educated officers depend upon the number of "validated billets," that is, military positions that have been determined to require an incumbent with graduate-level education in the applicable academic discipline. Each Service has established a system, ordinarily culminating in a board of senior officials in the Service headquarters, which examines the duty prerequisites for each billet nominated for validation and determines if the job does, in fact, require an officer with an advanced degree. Requirements for included graduate legal education are determined separately.

Other Full Time Education Programs

In addition to the Professional Development Education programs already described there are a variety of other full time programs tailored to meet the particular needs of the Services. (Health Professions Education programs are discussed in a separate section at the end of this chapter).

Several programs have been designed to permit selected individuals an opportunity to work toward associate, baccalaureate, or advanced degrees. These programs benefit the Services in several important ways: they increase the technical qualifications of the individuals in the program; they improve the general educational levels of Service personnel; and they provide career retention and recruiting incentives to outstanding personnel. In addition, to the extent possible, personnel in advanced education programs are later used to satisfy validated requirements and hence reduce the required student load in graduate education for validated billets.

The degree-completion programs are managed by the individual Military Departments and each has its own selection criteria. However, in general individuals are not selected for a program unless the education will enhance their professional development and be of use to the Military Department. All of the programs require a payback from the individual.

Short-course training provides the Military Services with needed skills in a wide variety of scientific, administrative, and other fields. These programs are selected to train personnel in job-oriented skills that can best be acquired through abbreviated courses. Accounting, traffic management, and aviation safety are examples of skills involved. Some of this included training is conducted in DoD schools, the remainder in civilian institutions.

The following table displays load data for this category;

Table VII-10.--Training Inputs, Outputs, and Loads, Other Full Time Education Programs, FY 1984-86

Service Component	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army					
Active	253	268	2,030	2,030	263
Navy					
Active	134	142	858	857	136
Reserve	1	1	24	24	1
Marine Corps					
Active	129	129	104	89	132
Air Force					
Active	985	776	9,395	9,475	699
Reserve	19	25	664	664	26
Natl Guard	12	14	348	348	15
DoD					
Active	1,501	1,315	12,387	12,451	1,230
Res/Gd Tot	32	40	1,036	1,036	42
DoD Total	1,533	1,355	13, 423	13,487	1,272

Health Professions Education

This subcategory is made up of a wide variety of courses for personnel of all health professions -- physicians, dentists, nurses, medical administrators, and so forth. The majority of the courses offered are conducted in military facilities and vary in length from a few days to a full year. Some training is conducted at civilian medical institutions and in the case of the Army, includes some advanced degree programs. The purpose of Health Professionals Education is to expand the skills

of military medical personnel and to provide them timely information on the latest techniques in their fields. Educational programs connected with the acquisition of health professionals is carried in this report under Officer Acquisition Training. In this category, the Navy provides long-term training. The Army and Air Force rely on short courses.

The following table shows load data for Health Professions Education.

Table VII-11.--Training Inputs, Outputs, and Loads,Health Professions Education, FY 1984-86

Service	FY 84 Load	FY 85 Load	FY 86 Input	FY 86 Output	FY 86 Load
Army	730	779	17,274	17,260	808
Navy	221	280	316	223	337
Air Force	465	462	2,539	2,596	444
DoD Total	1,416	1,521	20,129	20,079	1,589

VIII

RESERVE COMPONENTS TRAINING

In addition to training members of the active forces, the Service training establishments also train members of the Reserve Components. Reserve Component training, as part of individual training and education, involves Reservists and Guardsmen who are on active duty for formal school training. It does not include training of Reserve Component members provided under the following circumstances:

- Training received while members are on extended active duty (this training is included in active force aggregates);
- Training conducted by the Reserve Components themselves;
- Training received on annual active duty, except if provided through courses conducted by the active training establishment;
- Any training received while the individual is not in an active military status; as a minor exception, some Reserve and Guard technicians attend military schools in Civil Service status.

The purpose of this chapter is to summarize the amount and types of training of Reservists and Guardsmen which are conducted by the active training establishments. The training loads discussed in this chapter are included within the loads attributed to the various Reserve Components in the previous chapters.

Training of members of the Reserve Components will comprise 18 percent of all individual training and education in FY 1986, or 4 percentage points more than in FY 1984. The change reflects DoD's overall manpower policy of increasing the peacetime reserve strengths relative to the active force strength in FY 1986. The Reserve training loads and workloads will increase accordingly. Training loads for each of the Reserve Components for each of the major categories of training for FY 1986 are shown in Table VIII-1.

Table VIII-1.--Training Loads, Reserve Components, FY 1986 [a/] 1/

Component	Recruit Training	One-Station Unit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Army Reserve	4,788	2,236	4	9,762	108	87	16,985
Army National Guard	3,741	6,394	44	8,420	232	55	18,886
Naval Reserve	1,513	0	0	1,800	0	42	3,355
Marine Corps Reserve	2,117	0	190	1,451	0	32	3,790
Air Force Reserve	443	0	14	1,497	85	79	2,118
Air National Guard	677	0	0	1,790	240	44	2,751
Total, Reserve Components	13,279	8,630	252	24,720	665	339	47,885

a/ Loads in this table are a summary of Reserve Components loads displayed previously in this report, and are not additive to them.

Table VIII-2 summarizes load data for entry-level Reserve Component basic qualification training for FY 1986.

Table VIII-2.--Enlisted Entry-Level Training, Reserve Components, FY 1986

	Input	Output	Load
Recruit Training	85,270	73,876	13,279
Initial Skill Training	108,543	100,641	21,033
One-Station Unit Training	40,217	36,175	8,630
Totals	234,030	210,692	42,942

Reserve Component training will account for an increasing share of all programmed Reserve and Active Training in FY 1986. Recruit Training for the Reserves and Guard accounted for 17 percent of all DoD Recruit Training in FY 1982 but will account for 23 percent in FY 1986. Reserve Component training accounts for 22 percent of all Initial Skill Training (Enlisted) and 41 percent of all Army One-Station Unit Training programmed in the Department of Defense for FY 1986.

Although entry-level training for enlisted personnel makes up 84 percent of total Reserve Component training loads, Reserve and Guard officers and enlisted personnel beyond the initial entry stage also are trained by the active establishment. The majority of this training is at the more advanced levels of Specialized Skill Training, and fills the same demands for skill progression or new equipment training that these types of training provide for active members. Reserve Component participation in Flight Training is relatively minor, since most aviator requirements in Reserve Component units are filled by experienced aviators who join after extended service in the active components.

To accommodate an increased force structure in the Reserve Components, more professional development training is required for mid-career officers and enlisted personnel in the Reserves and National Guard. However, the Reserve Components still account for only 7 percent of initial, intermediate, and senior levels of Professional Development Education, and about 4 percent of Enlisted Leadership Training in FY 1986.

The great majority of training of Reservists and Guardsmen is in Recruit and Specialized Skill Training and, for the two Army Components, One-Station Unit Training. Within Specialized Skill Training, most of this training is in Initial Skill Training for enlisted personnel. The combination of Recruit and Initial Skill Training or One-Station Unit Training for enlisted personnel, including Reservists and Guardsmen, provides them basic qualification training that transforms the untrained civilian into a servicemember with a useable skill.

Enlisted members of the Reserve Components without prior service receive the same basic qualification training as active service members. Each non-prior service enlistee in the Reserve Components undergoes, as a minimum, twelve weeks of active duty training. This is carried out by sending the new recruit through Recruit Training and on through Initial Skill Training. Alternatively, many Army Guardsmen and Reservists are provided similar training in certain skills through One-Station Unit Training. Trainees who graduate from Recruit Training proceed to Initial Skill Training in their occupational specialty. This may consist of a course in a Service school or Advanced Individual Training at an Army training center. If a course in the proper skill is not available, the trainee may be assigned to on-the-job training in an active duty for training status. The actual length of active-duty training, in comparison with the statutory twelve weeks minimum, varies from twelve weeks to twelve months, depending on the occupational specialities involved. To accomodate the Reserve Component soldier, the Army split-training program allows completion of initial entry training over a period of normally less than two years in two training periods.

Reserve Component personnel participate in a variety of non-resident courses sponsored by Service schools; Reservists and Guardsmen make use of these training opportunities on the same basis as active personnel. For many Reserve and Guard officers, consideration for promotion depends upon successful participation in Professional Development Education programs.

Beyond the training covered in the training loads, the active training establishment makes other valuable contributions to the state of training of the Reserve Components. Perhaps the most important is realized through former active members who join the Reserve Components after having been trained on active duty. The Reserve Components also receive graduates of Army ROTC who are not called to extended active duty. In many instances, the Active Components also provide facilities and equipment used by the Reserve Components for training.

In summary, training of members of the Reserve Components forms a significant portion of the workload of the active training establishment. Particularly at the entry level, this training is indispensable to the readiness of individuals and organizations of the Reserve Components and to the realization of the Total Force policy.

IX

TRAINING MANPOWER

General Description

Manpower associated with the individual training mission in the Department of Defense can be divided into two parts: first, the trainees and students being trained, and second, the military and civilian manpower that conducts and supports the training. These two classes of manpower are discussed and explained in this chapter.

Trainees and Students

Manpower undergoing training in the Defense training establishment is defined and quantified in three different ways, each of which serves a somewhat different purpose with regard to manpower accounting and resource allocation.

1. Training Loads. These are the "military training student loads" which are detailed in Chapters III through VII of this report -- the average number of military trainees, students, and cadets of each Service and component in training during a given fiscal year, which is subject to annual congressional authorization. Training loads include all military manpower of a given Service or component who are undergoing individual training, regardless of whether the training is conducted by the parent Service, one of the other Services, a DoD school, or by an agency or institution outside the Department of Defense, such as a civilian college or university. Training loads also include all military personnel in training regardless of their assignment status. Some trainees and students are assigned to the training activity; others are attending training in a temporary duty (TDY) or temporary additional duty (TAD) status while remaining assigned to their parent units; still others are attending while in transit from one permanent assignment to another.

Since training loads are an annual average and most courses are much shorter than a year in length, the actual number of students and trainees who enter training, and the number who graduate, is considerably greater than the training load. For example, the total programmed training load for Recruit Training in FY 1986 is about 58,000, yet about 370,000 persons are to enter Recruit Training and about 337,000 are to graduate.

2. Training Workloads. The total number of trainees and students undergoing training within DoD includes some trainees and students of foreign nations, DoD civilian employees, and members of other departments and agencies of the U.S. Government, notably the Coast Guard. In addition, many U.S. military students and trainees are trained by a Service other

than their own. Consequently, the average number of students being trained by a given Service, or its training workload, usually differs from its training load. For example, the Marine Corps has a programmed Flight Training load of 527 in FY 1986; however, since the training is conducted by other Services, its Flight Training workload is zero. On the other hand, because the Navy trains many personnel from other Services and Coast Guard and foreign students as well as most of its own students, the Navy's Specialized Skill Training workload is higher than its training load.

Since training workload, in conjunction with other applicable considerations, is the major determinant of the resources (manpower, funds, materiel and facilities) required to conduct training, it, rather than training load, is appropriately used in considering the allocation of resources to a Service or a training activity. Table IX-1 displays the programmed training workloads for each of the Services in FY 1986.

TABLE IX-1.--Training Workloads, FY 1986 a/
(Thousands)

Category	Army	Navy	Marine Corps	Air Force	DoD
Recruit	22.0	17.4	10.2	9.2	58.8
Officer Acquisition	5.8	6.4	.2	5.2	17.6
Specialized Skill	73.2	57.8	.1	28.6	159.7
Flight	1.9	2.7	7.5	.2	12.3
Professional Development Education	4.0	3.0	.5	3.1	10.6
One-Station Unit Training	20.9	-	-	-	20.9
Total	127.8	87.3	18.5	46.3	279.9

a/Detail may not add due to rounding.

3. Students, Trainees, and Cadets. In the Individuals accounts of the Defense Manpower Requirements Report, military manpower is included for each Service as "Trainees and Students" and (except for the Marine Corps) "Cadets". Conceptually, this manpower represents the number of military trainees, students, cadets and midshipmen programmed to be assigned (PCS as opposed to TDY/TAD) for training on the last day of a given fiscal year. Student, trainee, and cadet manpower is similar to training load in that both represent military members of the reporting Service in training status. Nevertheless, there are substantial differences in the way the amount of manpower in these two manpower aggregations is calculated, with the result that the totals are seldom the same. The major reasons for these differences are:

- Training loads are manyears in training status, as has been mentioned, whereas trainees, students, and cadets are end-strengths, or

numbers in training on the last day of the fiscal year. Trainee, student, and cadet numbers are thus affected by the seasonality of enlistment patterns, as described in Chapter III, while the element of seasonality is evened out in training loads.

- Training loads include students attending training in a temporary duty (TDY or TAD) status as well as those attending in a PCS status. In the Defense Manpower Requirements Report TDY and TAD students are carried in the categories of their parent units. In addition, some individuals attending training while in transit from one permanent assignment to another are included in training loads but are classified as "Transients" in the Defense Manpower Requirements Report.

Training loads are a more accurate measure of the amount of training that is needed to meet military requirements than are the categorizations "trainees," "students," and "cadets."

Manpower in Support of Training

Military and civilian manpower is required to accomplish the individual training mission. This manpower conducts and supports instruction, operates training bases and facilities, maintains training equipment, produces training aids, provides personal and community services to students, trainees, and other military members, plans and manages training, and performs all the other tasks necessary to conduct and support individual training conducted in training institutions.

ROTC students are not military members in an active duty status and are not included in military manpower training loads. However, ROTC Basic Camp loads are included in the Army Recruit training loads. To be consistent with this treatment of ROTC students, manpower supporting ROTC programs is not included in Tables IX-2 through IX-5.

The following tables summarize manpower in support of training by the general functions, Conduct of Individual Training, Training Base Operating Support, and Management Headquarters. Conduct of Individual Training includes the following types of manpower: instructors, instructional support, school/training center staffs, student supervisors and direct training support such as training aids and literature, audiovisual resources, and instructional systems development.

TABLE IX-2.--DoD Manpower in Support of Training,
Conduct of Individual Training Function
(End Strengths, Thousands)

	FY 84		FY 85		FY 86	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	38.3	11.4	41.7	12.2	43.5	13.3
Navy	29.2	2.7	28.4	2.8	29.5	3.4
Marine Corps	8.6	0.2	8.7	0.3	8.7	0.3
Air Force	21.7	7.4	21.8	7.0	22.1	7.1
DoD Total	97.8	21.7	100.7	22.4	103.8	24.1

TABLE IX-3.--DoD Manpower in Support of Training, Base Operating Support Function (End Strengths, Thousands)

	FY 84		FY 85		FY 86	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	11.2	23.7	8.3	24.0	8.3	23.7
Navy	7.4	7.6	7.0	7.7	7.1	7.4
Marine Corps	3.3	2.2	3.3	2.2	3.3	2.2
Air Force	11.4	7.3	11.1	7.5	10.8	7.8
DoD Total	33.2	40.8	29.7	41.4	29.4	41.1

TABLE IX-4.--DoD Manpower in Support of Training, Management Headquarters Function (End Strengths, Thousands)

	FY 84		FY 85		FY 86	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	0.6	1.0	0.6	0.8	0.6	0.8
Navy	0.3	0.5	0.3	0.5	0.3	0.5
Marine Corps	*	-	*	-	*	-
Air Force	0.9	0.5	0.9	0.4	0.9	0.5
DoD Total	1.8	1.9	1.8	1.7	1.8	1.8

*Less than 50.

TABLE IX-5.--DoD Manpower in Support of Training, All Functions (End Strengths, Thousands)

	FY 84		FY 85		FY 86	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	50.1	36.0	50.6	37.1	52.4	37.9
Navy	36.9	10.8	35.7	11.0	36.9	11.2
Marine Corps	11.9	2.4	12.0	2.5	12.0	2.6
Air Force	33.9	15.2	33.8	14.9	33.8	15.3
DoD Total	132.8	64.4	132.2	65.5	135.0	67.0

The Service estimates of training attributable manpower include some staff and support manpower that do not contribute to the production of student output and loads but are reported as training resources in the Five Year Defense Program (FYDP) because they belong to organizations with a primary mission of training. The majority of the non-training attributable manpower is for Base Operating Support (BOS) given to non-training tenant activities at training installations.

Table IX-6 shows changes in total military and civilian manpower in support of training between FY 1977 and FY 1986.

TABLE IX-6.--Trends, Manpower in Support of Training, DoD Total, By General Function, FY 1977-86 a/
(End Strengths, Thousands)

	FY 77			FY 82			FY 86			Percent Change Total Manpower:	
	Mil	Civ	TOT	Mil	Civ	TOT	Mil	Civ	TOT	FY 77-86	FY 82-86
Conduct of Individual Training	108	22	130	96	19	115	104	24	128	-2%	+ 11%
Base Operating Support	36	45	81	35	39	74	29	41	70	-13%	- 5%
Management Headquarters	2	2	4	2	2	4	2	2	4	-	-
TOTAL	145	70	215	133	60	193	135	67	202	- 6%	+ 5%

a/ Detail affected by rounding

As Table IX-6 shows, the total military and civilian manpower in support of training has increased slightly between FY 1982 and 1986. However, within the total, there has been a tradeoff. An increase in manpower conducting individual training has been partially offset by a similar reduction in Base Operating Support.

As shown in Tables IX-7 and IX-8, training workloads will be about 9 percent higher in FY 1986 than in FY 1982; considered with the 5 percent increase in the level of total manpower in support of training, this implies an increase in manpower productivity.

TABLE IX-7.--Trends, Training Workloads, FY 1977-86 a/
(Thousands)

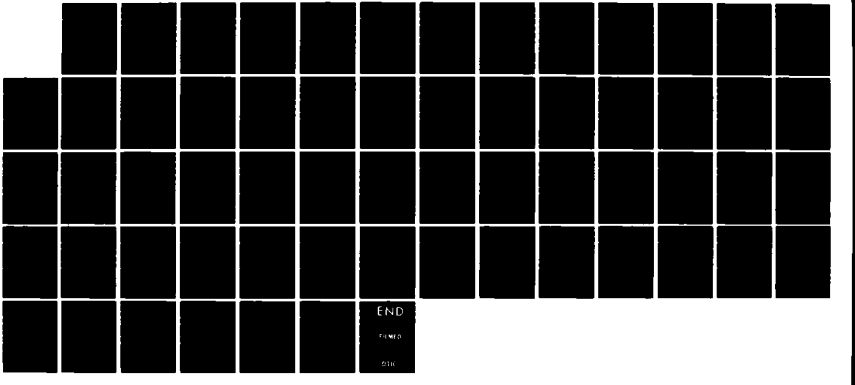
	FY 77	FY 82	FY 86	Percent Change FY 77-86	Percent Change FY 82-86
Army	99	113	128	+29%	+13%
Navy	67	78	87	+30%	+12%
Marine Corps	21	18	19	-10%	+ 6%
Air Force	54	47	46	-15%	- 2%
DoD Total	238	256	280	+18%	+ 9%

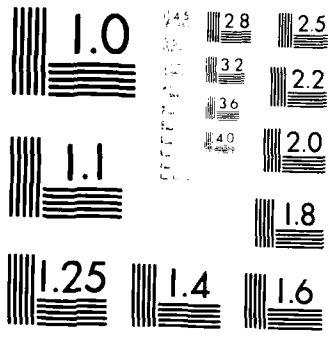
a/ Detail affected by rounding.

TABLE IX-8.--Trends, Training Manpower and Training Workloads, FY 1977-86
(Thousands)

	FY 77	FY 82	FY 86	Percent Change FY 77-86	Percent Change FY 82-86
Manpower in Support of Training	215	193	202	- 6%	+ 5%
Training Workloads	238	256	280	+18%	+ 9%

AD-A152 207 MILITARY MANPOWER TRAINING REPORT FOR FY 1986 VOLUME 4 2/2
FORCE READINESS REPORT(U) ASSISTANT SECRETARY OF
DEFENSE (MANPOWER INSTALLATIONS AND LOGISTICS)
UNCLASSIFIED WASHINGTON DC MAR 85 F/G 5/9 NL





Training Manpower Detailed by Service and Type of Training

Table IX-9 shows the manpower required to support FY 1986 training workloads by Service and training activity.

As was noted early in this chapter, training workloads, in conjunction with other factors, are the determinants of the resources required to conduct training. The workload/resource relationship is not a simple one, but depends upon the nature of training and training support involved. For example, Flight Training normally requires a great deal of support manpower for aircraft maintenance; weapons training requires close instructor supervision for safety considerations.

TABLE IX-9.--Training Manpower by Service and Type of Training, FY 1986
(Thousands)

Training Activity	Army		Navy		Marine Corps		Air Force		DoD	
	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
Recruit	4.4	0.2	1.6	*	2.3	*	0.7	*	9.0	0.2
Officer Acquisition	0.8	0.8	0.9	0.9	0.3	*	1.2	0.8	3.3	2.5
Specialized Skill	19.1	6.6	18.1	0.9	5.4	0.2	9.5	2.4	52.1	10.1
Flight	1.6	0.5	7.7	0.6	0.4	-	7.5	0.9	17.1	1.9
Professional Development	0.6	0.8	0.5	0.7	0.3	0.1	1.0	0.5	2.4	2.1
One-Station Unit Training	7.7	0.5	-	-	-	-	-	-	7.7	0.5
Medical Training	1.8	0.6	0.6	*	-	-	0.7	0.1	3.1	0.8
Direct Training Support	7.4	3.4	0.1	0.1	0.1	*	1.5	2.5	9.0	6.1
Base Operating Support	8.3	23.7	7.1	7.4	3.3	2.2	10.8	7.8	29.4	41.1
Management Headquarters	0.6	0.8	0.3	0.5	*	-	0.9	0.5	1.8	1.8
TOTAL[a]/	52.4	37.9	36.9	11.2	12.0	2.6	33.8	15.3	135.0	67.0

a/ The Service estimates of training attributable manpower include some staff and support manpower that does not contribute to the production of student output and loads but are reported as training resources in the Five Year Defense Plan (FYDP) because they belong to larger organizations with a primary training mission.

*Less than 50.

Manpower data in the six categories of training (i.e., Recruit through One-Station Unit Training) includes instructors, school/training center staffs and student supervisors. Direct training support includes such tasks as training aids and literature, audiovisual resources, and instructional systems development.

X

TRAINING MANAGEMENT AND FUNDING

General Description

Chapters III through VII of this report describe and explain the military training student loads requested to be authorized for each military component. These student loads represent patterns and levels of training effort which require manpower and other resources. The purpose of this chapter is to describe and explain the resources (other than manpower, which is discussed in Chapter IX), funding and costs associated with the conduct of individual training.

In considering training resources, it is important to distinguish between the training loads required by a Service but conducted in part outside the Service, and the workloads representing training conducted by the Service. As discussed in the previous chapter, the workloads, which represent training conducted by a Service, are the basis for resource requirements (manpower, materiel, facilities, and funds) needed to conduct and support the training that the Service executes.

Management of Individual Training

Detailed management of individual training is carried out by the four Military Services. Each of the Services, except the Marine Corps, has a training commander immediately subordinate to the Service chief who is responsible for most of the individual training conducted within that Service. Some training is managed directly by the Service headquarters. However, the most prevalent pattern of control is through a training command headquarters that manages most Service military schools, training centers, and other training facilities.

Staff Responsibilities

Within the Office of the Secretary of Defense, staff responsibility for individual training and education policies rests with the Assistant Secretary of Defense (Manpower, Installations, and Logistics), with a strong influence over the allocation and use of resources being exercised by the Assistant Secretary of Defense (Comptroller). The staffs of these two offices work closely together in the staff supervision of DoD individual training and education. Other OSD offices, such as Health Affairs, and Research and Engineering, participate as appropriate. The OSD role is generally one of policy formulation, allocation of resources, overview of Service training programs, and coordination among the Services.

Within each Service headquarters, a principal staff officer has responsibility for individual training. Other staff members may have primary responsibility for certain types of training, as, for example, a Service Surgeon General for professional medical training. Other staff members have collateral responsibilities for the allocation of manpower and funds to the training function.

Primary responsibility on the Army staff for individual training rests with the Deputy Chief of Staff for Operations and Plans and his subordinate, the Director of Training. Within the Navy, the principal staff officer is the Deputy Chief of Naval Operations for Manpower, Personnel, and Training. Headquarters, Marine Corps, manages training through the Deputy Chief of Staff for Training. Commanders of the separate major subordinate training activities report directly to the Commandant of the Marine Corps, dealing with the headquarters training staff. Within the Air Force, the Director of Personnel Programs, under the Deputy Chief of Staff for Manpower and Personnel, has staff responsibility for individual training.

Training Commands

The Army, Navy, and Air Force each has a command headquarters that manages most of the individual training conducted by that Service.

The Army's principal training command headquarters is Headquarters, Training and Doctrine Command (TRADOC), located at Fort Monroe, Virginia. TRADOC's control is exercised through training installation and school commanders throughout the United States.

The Chief of Naval Education and Training, headquartered at Pensacola, Florida, exercises control, through subordinate functional commanders, of education and training conducted in training centers, schools, and programs throughout the Navy.

For the Air Force, Headquarters, Air Training Command, at Randolph Air Force Base, Texas, directly controls individual training centers and units.

The Service-wide training commands are not responsible for all individual training and education conducted. As already noted, the Surgeons General are responsible for most health professional and medical technical training. Other examples include the Service Academies, which are under the direct supervision of the respective Service Chiefs.

The Service Training Command Chiefs and the Marine Corps Deputy Chief of Staff for Training are also the senior members of the Interservice Training Review Organization (ITRO). ITRO was formed in 1972 to facilitate cooperative training efforts among the Services. The committees and working groups of the Organization perform the detailed analysis which becomes the basis for decisions on the feasibility of consolidation of training courses or other cooperative arrangements. A listing of major joint training efforts is provided in Appendix B.

Training Facilities

Appendix C lists the principal individual training facilities of the four Services for each of the major categories of training. Projected average training workloads and training support manpower for FY 1986 are also shown for each facility listed.

Training Funding and Costs

The training costs addressed in this section include funding in the President's Budget for Fiscal Year 1986 requested for individual military training and education. These costs differ from life-cycle costs, which would take account of retirement and other costs that are not funded during FY 1986. Depreciation costs of training facilities and equipment are not included, although training investment costs estimated for FY 1986, such as procurement and construction costs, are included. The report uses the data in the DoD's Five Year Defense Program (FYDP) as the basis for all estimates of the manpower and funds devoted to training and education.

The costs in this chapter include funding for military pay and allowances for both PCS and TDY/TAD students, pay and allowances of military and civilian personnel in support of training, training-related PCS costs, base operating costs in support of training, training-related operations and maintenance costs (including civilian support personnel pay and allowances), training investment costs for construction and procurement, and overhead costs for training administration and command. Certain costs for activities that are organic parts of training organizations but that support non-training missions (such as Base Operating Support for non-training activities on training bases) are also included to provide comparability with the Five Year Defense Program and the President's Budget.

For a given Service, the requirement for funding for training arises from two factors: first, the need to fund the pay and allowances of its own military training student loads, regardless of where or by whom the students are trained; and, second, the need to provide for the level of individual training and education effort necessary to meet the Service's commitments to accomplish training for its own and other students.

For comparability, the funding requests associated with ROTC and other non-load training programs are deleted from Table X-1. Hence the table reports FY 1986 funding estimates related to the requested FY 1986 training loads.

Special caution should be exercised in using these costs for comparisons among Services. Differences in missions among the Services, differing operating and training conditions, and differences in the mix of Service training programs, degrade the soundness of comparisons based on aggregated data such as these.

TABLE X-1.--Funding of Individual Training by Service and Type of Training, FY 1986 a/
($ Millions)

	Army	Navy	USMC	Air Force	DoD
Recruit	$ 384.1	$ 486.3	$ 244.4	$ 295.9	$1,410.7
Officer Acquisition	125.0	169.6	24.1	180.1	498.8
Specialized Skill	1,686.1	1,800.5	494.6	950.3	4,931.5
Flight	488.7	893.9	58.1	1,031.0	2,471.7
Professional Development Education	367.0	152.1	39.5	229.1	787.7
One-Station Unit Training	443.3	-	-	-	443.3
Medical Training	331.3	156.9	-	188.4	676.6
BOS and Direct Training Support	2,299.6	1,089.2	226.4	1,044.2	4,659.5
Management Headquarters	67.2	31.9	0.4	57.2	156.7
PCS Cost for Training	302.1	168.3	111.8	70.1	652.3
TDY and Reserve Component Pay and Allowances	1,844.4	147.0	64.7	392.7	2,448.8
Total	$8,338.8	$5,095.8	$1,264.0	$4,439.1	$19,137.6

a/ May not add due to rounding.

Student pay and allowance totals for a Service's requested military student training load have been added to pay and allowances for the staff and support manpower for each Service's workload. This can produce significant distortions in the use of these aggregates for assessing training efficiency (e.g., in the Marine Corps, where significant loads are trained by other Services).

Appendix D shows a distribution of funds in the table above by appropriation.

Table X-1 includes substantial segments of cost which are not normally sensitive to significant shifts (say up to fifteen percent) in training load. These include certain command, base, facility, and equipment costs. These "fixed" costs need to be considered in program and budget adjustments because, within a reasonable range of output, they remain approximately the same and do not vary as the training load varies. They change, instead, with decisions to change the manner of accomplishing training, most often through training investment decisions or base realignments.

There are often substantial year-to-year fluctuations in funding for fixed costs. These costs are termed "fixed", not because they do not change from year to year, but because their changes characteristically are not "variable" with changes in workloads from period to period. Funding of these costs reflects significant increases, however, for years in which there are major procurements of, for example, simulators, aircraft, or construction in support of training.

Thus, the proportion of total funding requested to support training differs significantly among the Services and among categories of training; the proportion in the short run, however, is seldom less than one-third of total cost. This has important implications for the extent of funding adjustments appropriate to changes in the level of activity or size of a training program. Other things equal, if training funds are to be adequate for the needs of a reduced program, they must be reduced by a smaller proportion than the program loads in order to account for fixed costs. By the same token, program increases, within reasonable capacity limits, may not require a proportional increase in total program funding.

Training costs are affected by inflation, both because of price rises for goods and services and because of the pay of the military and civilian personnel involved as students, instructors, and support. Some training program costs are strongly affected, in addition, by energy cost increases, especially in flight training.

APPENDIX A

DETERMINING TRAINING REQUIREMENTS

Discussions of the determination of training requirements in this report reflect a generally uniform approach. The following overview of the methodology for assessing and calculating training requirements is provided as a framework for understanding this approach. As noted, details in calculation may differ to some extent among the Services and among the training categories.

Requirements

All training is accomplished to satisfy the need for personnel with certain types and levels of skills to man the approved or projected force. The Services, over the years, have developed detailed, systematic methods of determining the manpower needed to man and support the forces. The Defense Manpower Requirements Report discusses this process. From these force requirements for manpower, the need for trained personnel with specific skills can then be derived. For example, a given force structure establishes the number of trained enlisted personnel needed. The number of authorized positions within that force structure for radar technicians establishes the basic requirement for trained personnel with that skill. This process is reiterated on a phased basis for all skills and skill levels for each Service, for both officer and enlisted skills. The total of all personnel in all skills needed to perform all the jobs in the force at a point in time represents the total requirement for trained manpower projected for that date.

Inventory Projections

The requirements identified through this process must be measured against the available assets, in terms of trained personnel on hand in each skill and skill level. From this asset base, estimates are made of how many trained personnel will be available at various points of time in the future. These estimates take into account probable rates of change to the current inventory -- through reenlistment, promotion, discharge, death, retirement, or other causes. These estimates are based on the best historical information available, tempered by judgment of how in the future personnel policies, the state of the economy, behavioral patterns, and other factors, many of them difficult to predict, will affect the probabilities that a trained individual will remain in the Service. A comparison of skill requirements and skill inventory projections, over time, establishes the extent of shortage or surplus likely to exist in each skill area by month and year. Adjusting the inventory may entail retraining personnel who are in surplus skills, but to a much greater degree, adjustment is likely to require the training of new accessions at entry level in shortage skill areas. The process

places a demand on the personnel management and training establishments continually to analyze information about attrition as it occurs, by skill and skill level, in order to produce the right number of trained personnel with the proper skills needed to restore and maintain the balance of the skill inventory. The workload thus placed on the training establishment is detailed by graduates needed from courses of various lengths and is measured in terms of average student load, or "training load."

Average Training Loads

Resources (manpower, money, and materiel) needed for any particular category of training vary with the number of students undergoing training at any given time. Facilities must be constructed and maintained to accommodate these students in training. The training establishment must maintain a sufficient staff of qualified instructors to conduct instruction for the "load" of students. Students and Trainees, as described in the "Individuals" chapter of the Defense Manpower Requirements Report, must be programmed to account for the fact that these personnel are in formal school training and are not available for duty with operational units. All of these personnel must be paid, housed, and supported. The basis for establishing these resource requirements is the "average training load."

The aggregate training load of courses of instruction within a given training category or sub-category for a given period is computed in accordance with the following formula, except as noted:

$$L = \frac{\sum_{i=i}^{n} \left(\frac{E_i + G_i}{2} \right) t_i}{y}$$

where L is Average Training Load,

i is a class (1,2,...n) scheduled for a training course within the training category under consideration,

E is number of expected entrants to scheduled class i,

G is number of expected graduates from scheduled class i,

t is the calendar length of the syllabus of class i, and

y is the length of a calendar year expressed in the same units as t (1 year = 12 months = 52 weeks = 365 days).

Fractions of carryover classes conducted during the year are included as though they were separate classes. However, individuals remaining in class at the end of a period are not counted as graduates, nor are individuals already in a class at the beginning of a period counted as entrants except for purposes of computing training loads for these fractions of courses.

The training load for a category or sub-category of training (e.g., Specialized Skill Training or Functional Training within that category) is the sum of the loads computed for all classes of courses within the category or sub-category.

This method of compu ation implies "straight-line" attrition, under an assumption that net class attrition occurs at a constant rate during a course. In the relatively few cases when attrition patterns experienced characteristically produce a significantly different distribution of attrition, the more appropriate attrition pattern is used in lieu of the term $\frac{E + G}{2}$.

Since attrition varies for different training programs and is not always spread uniformly throughout the length of a course of training, determining training loads becomes a complex problem in estimation. This process of estimation involves two related factors.

First, across the spectrum of training programs that are within the scope of this report, attrition varies from nearly zero to as high as 25 to 30 percent. Most officer Professional Development Education programs have practically no attrition. For FY 1986, the Services estimate that about 9 percent of new recruits, on a DoD average basis, will not complete Recruit Training because they will be found, in the course of undergoing training, not to have the mental or physical qualifications, or the motivation, for military life. Of these, some will fall ill or go absent without leave. Attrition rates in Specialized Skill Training vary widely, with the longer and more demanding courses tending to have higher losses. Pilot training is near the top of the scale in attrition; the higher rate of losses is based on lack of aptitude or motivation for flying, accidents, and similar causes which are intensified in this type of training. While historical data provide a basis for projecting attrition rates for all types of training, there is a considerable possibility for error based on variance in such factors as student quality and motivation.

A second necessary step in evaluating the effect of attrition is to estimate the phasing of attrition for each training program. In some courses, attrition tends to be higher in the early stages of a course when the inept and those lacking motivation are discovered. In other courses, the bulk of attrition may occur toward the end of the course. The patterns of losses vary widely among types of training and, to the detriment of precise planning, over time. The complexities of the

APPENDIX B

SELECTED MAJOR COURSES/SKILL AREAS TRAINED IN OTHER SERVICES

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Army	Construction Equipment Operator	Marine Corps Air Force
Army	Airborne	Navy Marine Corps Air Force
Army	Artillery	Marine Corps
Army	Armor	Marine Corps
Army	Explosive Ordnance Disposal	Navy Air Force Marine Corps
Army	Joint Tactical Communications Systems (TRI-TAC)	Navy Air Force Marine Corps
Army	Stinger/Redeye Missile	Navy Air Force Marine Corps
Army	Satellite Communication Fundamentals	Navy Air Force Marine Corps
Army	Tracked Vehicle Repair	Marine Corps Air Force
Army	Correctional Specialist	Navy
Army	Postal Operations	Navy Air Force Marine Corps
Army	Combat Casualty Care	Navy Air Force
Army	Biomedical Equipment Specialist (Basic and Advanced)	Navy Coast Guard
Army	Behavioral Science Specialist	Air Force Marine Corps
Army	Medical Laboratory Specialist (Basic)	Navy Coast Guard

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Army	Psychiatric Specialist	Navy
Army	Veterinary Specialist (Basic)	Air Force Marine Corps
Army	Laser Microwave Hazards	Navy Air Force
Army	Tropical Medicine	Navy Air Force
Army	Allergy/Clinical Immunology Specialist	Air Force
Army	Respiratory Specialist	Navy
Army	Occupational Therapy Specialist	Air Force
Army	Advanced Digital Theory	Navy
Navy	Aviation Maintenance	Marine Corps
Navy	Flight Training	Marine Corps Coast Guard
Navy	Cryptologic Courses	Army Marine Corps Air Force
Navy	Diving	Army Marine Corps Air Force Coast Guard
Navy	Musician	Army Marine Corps
Navy	Explosive Ordnance Disposal	Army Marine Corps Air Force
Navy	Cryptographic Maintenance	Marine Corps Air Force Coast Guard
Navy	Teletype Maintenance	Marine Corps
Marine Corps	Computer Systems, Programming (IBM 360)	Army Air Force Navy

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Air Force	Navigator Training	Navy Marine Corps
Air Force	Tempest (Cryptologic Courses)	Army Navy Marine Corps
Air Force	Cryptologic Equipment Maintenance	Army Navy Marine Corps
Air Force	Precision Measurement Training	Army Marine Corps
Air Force	Aircraft Pneudraulic Repair	Army
Air Force	Weather Training	Army Navy Marine Corps
Air Force	Military Dog Handler	Army Navy Marine Corps
Air Force	Law Enforcement	Navy Marine Corps
Air Force	Fire Control Specialist	Army Marine Corps
Air Force	Nondestruct Inspection	Army Navy Marine Corps
Air Force	Defense Sensor Interpretation and Application Training	Army Navy Marine Corps
Air Force	Air Intelligence Training	Army Navy Marine Corps
Air Force	Lineman Training	Army Marine Corps
Air Force	Professional Comptroller	Army Navy Marine Corps

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Air Force	Radio Communications Analysis	Army Navy Marine Corps
Air Force	Voice Processing	Army Navy Marine Corps
Air Force	Cryptoanalysis	Army Marine Corps
Air Force	Stinger Missile	Army
Air Force	Imagery Production	Marine Corps

APPENDIX C

INDIVIDUAL TRAINING FACILITIES AT MAJOR LOCATIONS
BY TRAINING CATEGORY, FY 1986

A. Recruit Training

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Army			
Fort Dix, NJ	5,873	1,184	45
Fort Jackson, SC	7,039	1,309	75
Fort Knox, KY	2,929 b/	618	67
Fort Leonard Wood, MO	3,491	815	60
Fort McClellan, AL	1,456	294	5
Fort Sill, OK	552	69	2
Fort Bliss, OK	729	92	3
Navy			
Great Lakes, IL	6,791	586	6
Orlando, FL	5,073	512	-
San Diego, CA	5,587	450	14
Marine Corps			
Parris Island, SC	5,304	1,327	6
San Diego, CA	4,895	1,087	5
Air Force			
Lackland Air Force Base, TX	9,167	714	18

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters, and Base Operating Support.
b/ Includes ROTC Basic camp workload.

B. Officer Acquisition Training

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Army			
Fort Benning, GA	298	44	3
Fort Monmouth, NJ	282	48	22
West Point, NY	4,178	721	778
Navy			
Annapolis, MD	4,348	254	292
Newport, RI	785	124	16
Pensacola, FL b/	299	-	-
Marine Corps			
Quantico, VA	396	259	4
Air Force			
Colorado Springs, CO	4,228	1,080	743
Lackland Air Force Base, TX	761	161	17

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

b/ Manpower not separately identified by training category in manpower documents.

C. Specialized Skill Training

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Army			
Aberdeen Proving Ground, MD	3,691	1,382	281
Charlottesville, VA	230	30	0
Fort Belvoir, VA	1,917	604	160
Fort Benning, GA	4,321	1,123	211
Fort B. Harrison, IN	3,384	570	165
Fort Bliss, TX	2,213	915	285
Fort Bragg, NC	1,294	725	171
Fort Devens, MA	1,231	957	222
Fort Dix, NJ	1,660	570	11
Fort Eustis, VA	3,087	1,106	342
Fort Gordon, GA	10,330	2,486	1,084
Fort Huachuca, AZ	1,368	657	164
Fort Jackson, SC	3,952	1,123	86
Fort Knox, KY	2,749	1,210	434
Fort Lee, VA	5,788	1,230	355
Fort L. Wood, MO	1,637	501	57
Fort McClellan, AL	1,913	708	148
Fort Rucker, AL	1,493	345	108
Fort Sam Houston, TX	6,148	898	145
Fort Leavenworth, KA	432	121	6
Fort Sill, OK	3,482	1,175	469
Fort Monmouth, NY	186	86	29
Monterey, CA	3,764	242	987
Redstone Arsenal, AL	2,083	967	451
Rock Island, IL	274	0	65
Savanna Army Depot, IL	187	0	50
Texarkana, TX	281	0	37
Fort Ord, CA	95	35	34
Little Creek, VA	185	86 b/	17
Lackland AFB, TX	0	12 b/	0
Brooke Army Medical Center	161	28	7
USAMEOS, Aurora, CO	267	47	32

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

b/ Instructors assigned to training facilities of another Service.

C. Specialized Skill Training (continued)

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Navy			
Athens, GA	392	55	12
Bangor, WA	536	463	24
Bethesda, MD (Medical)	248	70	8
Charleston, SC	798	476	7
Dam Neck, VA	2,410	1,412	47
Great Lakes, IL	9,634	1,739	34
Great Lakes IL (Medical)	889	155	6
Groton, CT	2,046	899	7
Groton, CT (Medical)	85	15	3
Gulfport, MS	438	138	11
Idaho Falls, ID	725	651	--
Indian Head, MD	270	113	6
Jacksonville, FL	308	255	--
Lakehurst, NJ	600	163	28
Little Creek, VA	876	156	9
Mayport, FL	259	132	2
Memphis, TN	8,018	1,012	166
Meridian, MS	1,264	122	10
Newport, RI	694	421	22
Norfolk, VA	2,044	1,060	25
Oakland, CA	62	11	8
Orlando, FL	5,341	572	12
Panama City, FL	271	190	6
Pearl Harbor, HI	343	236	8
Pensacola, FL	2,076	834	133
Pensacola, FL (Medical)	70	34	14
Philadelphia, PA	388	59	3
Port Hueneme, CA	551	165	27
Portsmouth, VA (Medical)	245	62	2
San Diego, CA	8,585	3,482	179
San Diego, CA (Medical)	852	130	8
San Francisco, CA	597	160	24
Schenectady, NY	1,418	772	--
Vallejo, CA	1,231	493	--
Windsor, CT	247	192	--
Whidbey Island, WA	202	129	2

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

C. Specialized Skill Training (continued)

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Marine Corps			
Albany, GA	45	28	1
Camp Lejeune, NC	2,845	1,054	42
Camp Pendleton, CA	1,433	797	13
Parris Island, SC	72	107	0
Quantico, VA	1,356	997	40
San Diego, CA	330	65	1
Twentynine Palms, CA	1,892	661	110
Air Force b/			
Chanute Air Force Base, IL	4,025	1,354	449
Fairchild Air Force Base, WA	286	388	22
Goodfellow Air Force Base, TX	1,761	472	62
Homestead Air Force Base, FL	72	99	2
Keesler Air Force Base, MS	6,541	1,754	612
Lackland Air Force Base, TX	2,869	1,018	194
Lowry Air Force Base, CO	4,528	1,662	347
Sheppard Air Force Base, TX	5,535	1,536	521

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

b/ Includes Active AF, Civilian, ARF & Others; does not include field or contract training.

D. Flight Training

Facility Location	Workload	Training Staff E/S a/ Military	Civilian
Army			
Fort Rucker, AL	1,866	1,550	454
Navy			
Chase Field, TX	163	1,032	128
Corpus Christi, TX	321	545	84
Kingsville, TX	163	1,107	93
Meridian, MS	115	832	79
Pensacola, FL	740	1,635	172
Sacramento, CA	--	35	1
Whiting Field, FL	929	965	76
Air Force			
Columbus Air Force Base, MS	373	1,314	103
Lackland Air Force Base, TX	177	8	0
Laughlin Air Force Base, TX	425	1,416	122
Mather Air Force Base, CA	814	988	128
Randolph Air Force Base, TX	177	800	137
Reese Air Force Base, TX	389	1,178	153
Sheppard Air Force Base, TX	283	267	27
Vance Air Force Base, OK	341	411	12
Williams Air Force Base, AZ	460	1,399	137

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

E. Professional Development Education

Facility Location	Workload	Training Staff E/S a/ Military	Civilian
Army			
Carlisle Barracks, PA	261	116	153
Fort Belvoir, VA	257	66 b/	132
Fort Bliss, TX	220	82	26
Fort Leavenworth, KA	796	252	179
Fort McNair, DC	315	46 c/	20
DoDCI, Navy Yard, D.C.	483	23 d/	14
Navy			
Monterey, CA	1,879	39	170
Newport, RI	53	15	--
Norfolk, VA	290	26	45
Marine Corps			
Quantico, VA	421	195	58
Camp Lejeune, NC	49	16	0
Air Force			
Bolling AFB, DC	7	21	2
Gunter Air Force Station, AL	206	58	8
Maxwell Air Force Base, AL	1,602	546	157
Wright-Patterson Air Force Base, OH	1,284	276	274

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.
b/ 24 Army, 42 Other Services
c/ 20 Army, 26 Other Services
d/ 7 Army, 16 Other Services

F. One-Station Unit Training (OSUT)

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Army			
Fort Benning, GA	7,119	2,263	102
Fort Bliss, TX	1,068	645	31
Fort L. Wood, MO	3,412	1,482	102
Fort Sill, OK	3,853	1,366	84
Fort McClellan, AL	2,576	691	34
Fort Knox, KY	2,892	1,319	185

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, and student supervisors. Excludes training support, management headquarters, and base operating support.

APPENDIX D

SUMMARY OF TOTAL FUNDING FOR INDIVIDUAL TRAINING AND EDUCATION, BY SERVICE AND APPROPRIATION, FY 1984-86
($ millions)

Appropriation	FY 84	FY 85	FY 86
Army			
Operations and Maintenance	$2,434.8	$3,046.3	$3,231.0
Military Personnel	2,376.8	3,409.6	3,663.8
Reserve Personnel	192.8	329.4	381.0
National Guard Personnel	269.3	412.5	479.4
Aircraft Procurement	185.0	249.8	206.3
Missile Procurement	1.2	0.8	3.4
Procurement Weapons and Tracked Combat Vehicles	20.0	29.9	36.2
Procurement of Ammunition	0.0	0.0	0.0
Other Procurement	20.3	23.0	41.6
Military Construction	203.6	199.0	296.0
Total Army	$5,703.6	$7,700.4	$8,338.8
Navy			
Operations and Maintenance	$1,058.6	$1,311.8	$1,392.0
Military Personnel	2,000.8	2,853.2	2,995.2
Reserve Personnel	72.2	80.5	117.7
Aircraft Procurement	213.7	247.2	229.1
Other Procurement	53.7	117.9	154.3
Military Construction	121.9	159.7	207.5
Total Navy	$3,520.8	$4,770.3	$5,095.8
Marine Corps			
Operations and Maintenance	$ 147.4	$ 160.4	$ 164.5
Military Personnel	699.4	943.2	1,023.9
Reserve Personnel	42.4	67.9	69.8
Procurement	5.7	37.7	5.8
Total Marine Corps	$894.9	$1,209.1	$1,264.0

Appropriation	FY 84	FY 85	FY 86
	Air Force		
Operations and Maintenance	$1,286.4	$1,359.8	$1,402.6
Military Personnel	1,574.3	2,281.5	2,384.8
Reserve Personnel	55.1	60.2	63.2
National Guard Personnel	50.1	76.1	82.4
Aircraft Procurement	106.5	230.7	352.9
Other Procurement	20.0	28.8	28.3
Military Construction	99.7	91.7	124.9
Total Air Force	$3,192.0	$4,129.0	$4,439.1
Total Department of Defense	$13,311.3	$17,808.8	$19,137.6

Note: Totals may not add due to rounding. These totals exclude funding for individual education and training programs for which loads are not requested and for which funds were not shown in the funding tables in Chapter X (e.g., ROTC).

READINESS IMPLICATIONS

OF

COLLECTIVE UNIT TRAINING

DEPARTMENT OF DEFENSE

March 1985

Prepared by

Office of the Assistant Secretary of Defense
(Manpower, Installations and Logistics)

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READINESS IMPLICATIONS OF COLLECTIVE UNIT TRAINING

INTRODUCTION

Military operations are performed by organizations, not by individuals. To attain full readiness, these organizations must learn to operate as cohesive and responsive teams that are capable of succeeding in appropriate wartime missions. This section of the Force Readiness Report discusses the state of readiness of U.S. Forces in terms of trends in the amount and quality of this team training.

Collective Unit Training in Perspective. The first part of this volume of the Force Readiness Report discusses the training of servicemembers as individuals in the institutional setting, mainly in military schools and training centers. Graduates of these schools join operational units, where the individual learning process continues through formal and informal on-the-job training and job experience. Units, in addition, engage in team training, referred to in this report as "collective unit training," to improve and maintain the operational capability of each unit and such subordinate units as it may have.

The term "unit" includes the whole range of military organizations from the smallest to the largest. At the lower end of the spectrum there are aircrews, infantry squads, combat vehicle crews, and a wide variety of primary organizations including sections, work centers and other organizational groupings, normally under a single leader or supervisor. Training exercises of larger units, such as battalions and brigades in the Army or Marine Corps, frequently include attached and supporting organizations from outside the formal organizational structure. Toward the top of the spectrum, units may include cooperating organizations from more than one Military Service and from allied nations. "Collective unit training" includes the team training and exercises of this full spectrum of units.

Effects of Other Elements of Readiness. Both materiel readiness and personnel readiness, discussed in other volumes of the Force Readiness Report, have a profound effect on the quality of collective unit training.

The readiness of a unit's materiel influences the amount of collective unit training that can be conducted, the amount of command attention that can be devoted to it, and the quality of the training.

Personnel readiness is particularly important to sound collective unit training. This type of training is most effective in terms of developing and retaining team proficiency when:

- The units undergoing training are at full strength.
- Personnel turnover and turbulence are low.
- Leadership positions are filled with qualified people.

- Individual unit members are capable of learning and performing in their job skills.

There has been an improvement over the past several years in these personnel factors. This improvement makes it possible for units to concentrate more attention on collective unit training by lessening the need for constant corrective training of individuals and repetitive training at the primary unit level. The improved availability of qualified leaders, especially at the smaller unit level, enhances the quality of the collective unit training, since the leaders are primarily responsible for the proficiency of their units. Personnel stability raises the level of retention of team skills; as a result, the collective learning effects of collective unit training are retained over a longer period of time, and greater readiness value is gained from a given amount of training.

While high personnel and materiel readiness provide the preconditions for good collective unit training and enhance its value, they cannot substitute for it. Team proficiency is gained only through well-prepared, realistic collective unit training. Furthermore, team proficiency tends to decay rapidly unless the team is exercised regularly. Units which have not been properly trained are subject to avoidable casualties and reverses in combat despite the quality of their personnel and weapons. Well-trained units can be counted on to acquit themselves well in combat.

Readiness Indicators. The following four subsections of this report discuss the readiness status of each of the four Military Services with regard to collective unit training. Appropriate statistics that indicate levels and trends of collective unit training activity are included for each Service. While these indicators are useful for this purpose, some of them need to be used with some caution for the following reasons:

- Some statistics, notably flying hours and ship steaming hours, include operational activity as well as training activity. For example, flying hours for antisubmarine warfare aircraft include operational ASW patrol flights as well as flights undertaken for training only. The two types of activity are not readily separable; they are funded from the same accounts, and all operational activity has some training value, although the amount may vary from a great deal to very little. An unprogrammed amount of operational activity may cause a temporary peak in the statistics without a commensurate enhancement in readiness.

- For many types of support units, activities in wartime are much the same as in peacetime; consequently, routine peacetime operations constitute most of the collective unit training of these organizations. For example, maintenance units and underway replenishment ships train mainly by performing their routine support missions. Participation in exercises by such organizations enhances training readiness mainly by raising the tempo of activity and, in some cases, changing the environment in which the work is done.

- Some activity indicators, notably battalion training days, do not disclose the actual differential values of the included activities. For example, a day of live-fire exercises may be much more valuable to a tank unit than a day of limited maneuvers without live fire.

Where it is feasible and useful, these anomalies are explained through supplemental statistics or discussions in the text.

ARMY

The Army's activity levels in collective unit training are described in the following paragraphs in terms of battalion training days, improvements in training devices and simulations, modernization of training ranges, flying hours, training ammunition expended, and field exercises conducted and planned.

Army Ground Unit Training. The Battalion Training Day (BTD) remains as the Army's general indicator of unit training tempo. The BTD is defined as a day during which a battalion or battalion-equivalent is engaged in a defined activity for the primary purpose of furthering the unit's training program. As such, it can be used internally as a rough measurement for comparing the training activity of like units in the same year or, in a more limited way, the activity of categories of units from one year to another.

The BTD is an imprecise tool for year-to-year comparisons. Changes in force structure and the number of reporting battalions will cause some fluctuation, as will minor year-to-year refinement of BTD criteria. This was the case in the FY 1983-86 figures in Table B-1.

TABLE B-1

ARMY BATTALION TRAINING DAYS (BTD)

Type Battalion	FY 83 Number of Units	FY 83 BTDs	FY 84 Number of Units	FY 84 BTDs	FY 85 Number of Units	FY 85 BTDs	FY 86 Number of Units	FY 86 BTDs
Armor	56	8830	55	8450	55	8596	55	8596
Infantry*	55	10139	54	10153	59	11162	69	13055
Mech. Infantry	58	8911	47	6694	45	6621	45	6621
Field Artillery	88	13900	86	13812	89	14124	94	14918
Armored Cavalry	20	3365	19	3178	20	3346	20	3346
Air Cavalry	7	1285	7	1285	8	1574	8	1574
Combat Engineer	48	7507	48	7575	47	7326	48	7483
TOTAL	332	53937	316	51147	323	52749	339	55593

*Non-mechanized (airborne, air assault, ranger, light, etc.)

As a generic index of days of collective unit training expended and programmed, the BTD does not distinguish between types of training, the weighted effectiveness of that training toward attaining or maintaining an objective readiness posture, or the relative value received from resources applied to that training. The actual cost of a BTD varies according to the activity conducted (e.g., a day of infantry dismounted training versus a tank battalion maneuver and live-fire exercise).

In spite of its limitations, the BTD is still the best available index of the general training tempo. An improved method of expressing training achievement is in development. The Training Resource Model (TRM) will be used by the Army's Deputy Chief of Staff for Operations and Plans to relate training activities by unit and/or mission to specified training proficiency levels and to the required operating tempo and costs. The end result will be a measurable linkage, which is not now available, between readiness and resources.

It should be emphasized that while the average number of annual BTDs has remained relatively constant at 162-164 days, the quality of training has steadily increased, largely because of improvements in training ranges, devices, simulators and simulations. This progress will accelerate beginning in late FY 1985 as new, automated ranges under construction since FY 1984 begin coming on line and programmed training devices begin emerging from the long development and acquisition pipeline. These improvements will be integrated into the Army's Battalion Training Management System (BTMS) at the unit level and into the comprehensive training strategies of the Army as a whole.

Training Devices, Simulators and Simulations. Training with actual equipment gives soldiers and their leaders confidence that it will work effectively in combat. As a further step in the learning process, training with simulators allows soldiers to practice techniques which, if performed on actual equipment or with live ammunition, would have environmental implications or would be too time-consuming or too expensive. These training devices are used in conjunction with the major piece of equipment to enable the Army to maintain and improve the combat readiness of soldiers, crews and weapon systems, to reduce training and operating costs, to conserve scarce resources such as fuel, weapons, and ammunition, and to teach skills not attainable with operational equipment (for example, to maneuver and shoot without being killed). Training technology, much of which employs video disc, computer-generated imagery, or lasers, is a U.S. strength which is being exploited to ensure that American soldiers and their leaders can operate, maintain, and fight their new equipment as closely as possible to its full capabilities.

Training devices provide two payoffs: improved combat effectiveness and cost avoidance. Improved combat effectiveness comes from training with realistic, challenging devices such as the Multiple Integrated Laser Engagement System (MILES) during field training exercises, and the Army Training Battle Simulation System (ARTBASS) for combined arms command and staff war gaming. Cost avoidance results from such actions as substituting subcaliber or simulated firing for expensive ammunition types.

As training devices become more technologically sophisticated, we are witnessing the merging of these two payoffs. The AH-64 Combat Mission Simulator (CMS), to be fielded in FY 1986, permits attack helicopter crews to fly simulated wartime maneuvers safely and engage targets with onboard weapons systems for relatively minor costs versus $36,600 per missile and approximately $3,000 per flying hour. The Unit Conduct of Fire Trainer (UCOFT) for the M-1 or M-60A3 tank allows tank commanders and gunners to acquire and engage targets in multiple combat scenarios while an instructor monitors their proficiency and controls the difficulty of the battle

action. The UCOFT will reduce training ammunition requirements by about 34 rounds per crew per year, with a training ammunition cost avoidance of approximately $7,548 per tank.

In addition to helping to control training costs, each of these systems allows repetitive practice regardless of weather conditions or range availability, thus improving the state of training proficiency.

The schedule for fielding the first of these simulators is as follows:

SIMULATOR	YEAR
Tank UCOFT	FY 1985
AH-64 CMS	FY 1986
ARTBASS	FY 1986

Range Modernization. The Army Range Modernization Program represents a tripartite thrust to improve the training readiness of soldiers and units. New standard ranges, which are designed to meet training requirements created by the fielding of new systems, are programmed for construction. Existing ranges, rendered obsolete by more than twenty years of low-priority funding, will be upgraded. Existing adequate facilities will be further enhanced to meet present as well as future program needs.

The Multi-Purpose Range Complex (MPRC) provides a facility for commanders to focus on crew through company gunnery proficiency by providing a realistic target array and immediate feedback of firing effectiveness. Further, the MPRC supports all gunnery training strategies for the M-1 Abrams Tank, M-2/M-3 Bradley Fighting Vehicles, and the AH-64 Apache Attack Helicopter.

During the developmental phase of the M-1, M-2, and M-3 weapon systems, the Armor and Infantry Schools developed ranges to support the associated gunnery training requirements. The Infantry School identified seven discrete facilities required to support M-2/M-3 gunnery, while the Armor School identified six ranges required to support the M-1. Construction of mission-specific, large-caliber firing ranges at divisional posts would have consumed disproportionate amounts of training land and would have been extremely costly.

To avoid these drawbacks, the Army designed the MPRC as a single range facility which is 900 meters wide and 4500 meters long. The range design meets all current and projected proficiency and sustainment gunnery requirements for armor as well as mechanized infantry units. Further, attack helicopter crews will be able to conduct sustainment gunnery firing on this facility. Within this same facility, artillery and air defense weapons firing can also be conducted, either separately or incorporated into a combined-arms scenario involving all of the players in a combined-arms team.

Arrays of infantry and armor targets of an MPRC provide the arena for combined-arms training, sustainment, and qualification of units in a wide variety of scenarios, constrained only by safety considerations and the

imagination of the commander. Targetry installed on the MPRC is computer controlled and scored. The automated scoring provides commanders the ability to evaluate unit gunnery proficiency objectively and in near real time.

The multi-purpose range complex concept has also been adapted to support unit training requirements for light infantry. These facilities are designed to support the combined arms live-fire exercises prescribed in the Army Training and Evaluation Program (ARTEP) for light infantry, and also will use fully automated, type-classified targetry.

The tentative construction schedule for multi-purpose range complexes is:

FY 1984
Fort Hood, TX*
Fort Riley, KS*
Fort Bliss, TX*

FY 1985
Fort Bragg, NC
Camp Casey, Korea
Fort Stewart, GA

FY 1986
Fort Campbell, KY
Fort Carson, CO
Wildflecken, Germany
Fort Hunter-Liggett, CA
Fort Lewis, WA

FY 1987
Fort Polk, LA

FY 1988
Pahakuloa Training Area, HI
Camp Grayling, MI
Gowen Field, ID

*Under construction

Flying Hours. The Active Army Flying Hour Program (FHP) provides flying hours as the major resource for aviation unit training. The goal of the FHP is to achieve the number of flying hours required to support training for crews in maintaining individual, unit and combined-arms proficiency for operational aviation units at their programmed manning levels. The FHP is expressed in terms of hours required per crew per month.

The FHP is a total system designed to realize the full combat potential of a growing and increasingly sophisticated aviation force. The FHP as a whole consists of hours used for training individual aviators, aviation units and combined-arms teams, and for carrying out unique missions of major army commands. Flight time undertaken for one of these purposes may also satisfy one or more of the other purposes. For example, participation in a combined-arms exercise may also satisfy some unit and individual flying requirements.

Table B-2 summarizes actual and estimated flying hours in terms of total hours by selected aircraft types for FY 1983 through FY 1986.

TABLE B-2

ARMY TOTAL FLYING HOURS

Aircraft	Actual FY 1983	Actual FY 1984	Estimated FY 1985	Estimated FY 1986
		ACTIVE FORCE		
AH-1	107,142	111,130	143,649	160,584
AH-64	0	0	14,654	37,878
CH-47	36,411	46,762	50,537	49,332
OH-58	219,119	222,225	236,387	281,618
UH-1	536,591	502,379	553,515	494,663
UH-60	62,242	82,708	133,345	184,443
OV-1	17,980	17,444	21,890	22,467
Others	236,329	212,256	233,840	273,897
TOTAL	1,215,814	1,194,904	1,387,817	1,504,882
		RESERVE COMPONENTS*		
AH-1	7,474	11,094	21,286	21,571
AH-64	0	0	0	0
CH-47	6,571	8,707	11,154	11,621
OH-58	60,333	59,316	63,488	43,287
UH-1	221,723	222,870	230,534	263,527
UH-60	274	490	888	4,043
OV-1	5,983	5,794	5,954	6,277
Others	70,586	66,802	73,502	55,924
TOTAL	372,944	375,073	406,806	406,250

*Reserve Component flying hours for aviator qualification courses are included within Active Force display.

The increased number of flying hours for FY 1985 and FY 1986 reflect the Army upgrade initiative made possible by additional congressional funding. These added upgrade hours are shown by aircraft system in Table B-3.

TABLE B-3

UPGRADE FLYING HOURS (THOUSANDS)

Aircraft	FY 85	FY 86
AH-1	25	50
OH-58	25	50
UH-60	10	20
UH-1	50	50
TOTAL	110	170

Table B-4 reflects trends in flying hours per crew per month in operational aviation units.

TABLE B-4

ARMY FLYING HOURS PER CREW PER MONTH
IN OPERATIONAL UNITS

Aircraft	Actual FY 1983	Actual FY 1984	Estimated FY 1985	Estimated FY 1986
		ACTIVE		
AH-1	10.4	9.8	12.9	15.1
OH-58	9.7	9.4	12.5	13.6
UH-60	12.2	13.5	16.8	20.9
UH-1	13.2	14.2	22.9	22.0
CH-47	8.6	12.9	10.1*	10.1
OV-1	15.4**	18.3	18.4	18.9
		NATIONAL GUARD		
AH-1	2.9	4.6	7.9	11.1
OH-58	6.9	6.8	7.0	8.4
UH-60	5.0	8.0	8.0	10.7
UH-1	9.8	10.0	9.2	10.4
CH-47	5.3	5.7	6.3	9.0
OV-1	8.9	8.8	8.7	7.7
		ARMY RESERVE		
AH-1	0	0	0	0
OH-58	5.0	4.9	5.2	5.2
UH-60	0	8.0	8.0	8.0
UH-1	9.0	8.2	10.6	10.3
CH-47	5.0	7.8	9.2	9.2
OV-1	0	0	0	0

*The downward trend between FY 1984 and FY 1985 in the CH-47 is a result of revision to the CH-47 Flying Hour Program model.

**FY 83 monthly flying hours per OV-1 crew were incorrectly shown as 8.7 in last year's report.

Table B-5 reflects combined arms proficiency requirements for the Active Component expressed in terms of hours per crew per month.

TABLE B-5

FLYING HOURS PER MONTH REQUIRED FOR COMBINED-ARMS CREW PROFICIENCY

Aircraft	Attack Pilot	Cavalry Pilot	General Support	Combat Support	Medevac
AH-1	17.3	22.8	--	--	--
OH-58	18.0	20.8	15.3	--	--
UH-1/UH-60	22.7	20.8	16.8	23.2	20.5
CH-47	--	--	10.1	--	--

The Army FHP has been constrained to some extent because of an Aircraft Procurement Army Spares (replenishment spare parts) funding shortfall that began in previous years. This funding shortfall was identified in FY 1982. Congressional action has provided funds to upgrade the FHP in FY 1985, and additional funds have been added in FY 1986 and FY 1987. The FY 1986 FHP, if approved, will meet the flying hour requirement for individual crew and continue progress toward meeting the requirement for combined arms proficiency.

Training Ammunition. Over the past several years the Army's Standards in Training Commission (STRAC), through careful examination of the relationship between live fire and proficiency and the availability of simulators, subcaliber devices and other alternative training means, has reduced training ammunition requirements to more realistic levels. Examples are shown in Table B-6.

TABLE B-6

REDUCTIONS IN TRAINING AMMUNITION REQUIREMENTS

Type Ammo	Previous Rounds Per Tube	Revised Rounds Per Tube
Tank Main Gun	210	134*
Artillery	350	232
4.2 Inch Mortar (HE)	250	146
2.75 Inch Rocket	406	160

*To be reduced to 110 rounds, then to 100 rounds, subsequent to fielding and full integration of Unit Conduct of Fire Trainer (UCOFT) into unit training programs.

The cost growth of training ammunition from FY 1984 through FY 1986 shown in Table B-7 is largely the result of the introduction of new weapons, such as the M-1E1 120mm Tank, Bradley Fighting Vehicles, DIVAD, and AH-64, which use more expensive types of ammunition. Costs per round for these new weapons are shown in Table B-8.

TABLE B-7

ARMY TRAINING AMMUNITION EXPENDED
($ in Millions)

Actual		Estimated	
FY 1983	FY 1984	FY 1985	FY 1986
774	733	780	811

TABLE B-8

COSTS PER ROUND OF TRAINING AMMUNITION

Old	Cost/Rnd	New	Cost/Rnd
M-1 (105mm)	$222.00	M-1E1 (120mm)	$900.00
VULCAN (20mm)	4.30	DIVAD (40mm)	77.00
M-113A1	.86	Bradley (25mm)	30.56
AH-1 (20mm)	3.44	AH-64 (30mm)	13.67

Ammunition to support force modernization will cost approximately $40 million in FY 1985; by FY 1990, $240 million will be required to support training on new weapons which will have been fielded by that time.

Because of the rising cost of the Army's total training ammunition requirements, live-fire training is being carried out for some weapons with less than the required amount of ammunition. Examples of such currently constrained training ammunition are: 7.62mm linked machine gun ammunition, 2.75 inch rockets, and both service and practice light antitank weapons (LAW). Training ammunition for most other weapons is available and is used at the level of the computed training requirement.

Army-Sponsored Field Exercises. The focus of unilateral Army training exercises remains at the battalion task force and brigade levels. These exercises range from force-on-force tactical exercises utilizing the Multiple Integrated Laser Engagement System (MILES) to combined-arms live-fire exercises. The tempo of collective training will continue at about the same level during FY 1985 and 1986 as during FY 1983 and 1984, although the use of training simulations and devices is increasing.

Army exercises include performance-oriented small-unit collective training leading to participation in combined-arms and joint and combined exercises. The primary collective unit training goal is the creation and sustainment of effective combined-arms teams consisting of fully integrated combat, combat support, combat service support, and close air support elements. Many Army exercises include Air Force tactical air and airlift units as well as Navy and Marine Corps elements.

Units of the Army National Guard and Army Reserve regularly participate in Active Army exercises under the partnership and overseas deployment training programs. During FY 1984, participation in Army field training exercises provided over 1,000 Reserve Component (RC) units/cells the opportunity to train with Active Component counterparts as part of the Overseas Deployment Training (ODT) program. During FY 1985, 20,000 RC personnel will participate in ODT in Europe and the Far East. Of significance is the participation of an Army National Guard Engineering Task Force in Panama on an exercise with Panama Defense Forces, the first time that significant Reserve Component elements have been committed to training in Third World countries.

The National Training Center (NTC), Ft. Irwin, California, provides a realistic training environment for units to perfect collective tactical mission tasks. In FY 1985, 28 mechanized infantry and tank battalion task forces will conduct two weeks of intensive training at the NTC. This compares to 24 battalion task force exercises in FY 1984. In FY 1986, the program will also include 28 battalion task forces, three of which will be from Reserve Components. These exercises represent the pinnacle of Army training in units and are a valuable readiness multiplier.

Army Participation in JCS-Coordinated and Directed Exercises. The Army will participate in 46 JCS exercises each year in FY 1985 and FY 1986. These exercises stress joint tactics, techniques and procedures, which are keys to the success of operations with joint forces. These learning objectives are incorporated into all JCS exercises and are constantly reviewed for adequacy and applicability. In addition, JCS exercises provide training with other U.S Services and allied forces and practice in integration of Reserve Components. Most JCS exercises are conducted outside of the continental United States and, as such, demonstrate U.S. intent to honor treaty obligations, maintain a presence, test operations plans, test interoperability with other forces, and provide opportunities to operate in accordance with the laws of war.

Summary. Collective unit training for the total Army force has been and remains a priority effort. Collective training has been significantly enhanced through training readiness improvement programs. Modernization of training equipment, facilities, simulators and devices greatly enhances the ability of Army forces to train for war. Collective unit training continues to improve with this added modernization while achieving efficiency in training costs.

Sustainment of desired training readiness levels is a function of operating tempo, which in turn is dependent on the availability of resources such as fuel, repair parts and ammunition required to achieve a ready state. The FY 1986 budget provides the resources required to continue the momentum gained over the past several years.

NAVY

Within the Navy, collective unit training prepares groups (teams, crews, etc.) to accomplish tasks required of each group as an entity. Intra-unit training, which emphasizes basic team proficiency and safety considerations, must be accomplished first; inter-unit training, which trains groups in integrated warfighting skills and prepares them for deployment, then follows and builds on the skills developed in intra-unit training.

Two general measures of the level of effort devoted to collective unit training are steaming days for afloat units and flying hours for aviation units.

Steaming Days. The Navy's goal for training operating tempo (OPTEMPO) is an average of 29 steaming days per quarter for the non-deployed fleets. The deployed fleets normally are allocated the additional resources required to support 50.5 steaming days per quarter; this provides them the means to carry out assigned operational tasks, including the presence of one carrier battle group in the Indian Ocean, as well as the resources to support training. In FY 1980-1982, and again in FY 1984, unscheduled increases in steaming days devoted to operational tasks were funded by supplemental appropriations and internal reprogrammings. The FY 1985 budget, as approved by the Congress, funds steaming days at a level that should continue to maintain training operations of an average of 29 days per quarter for the non-deployed fleets. The FY 1986 Budget request maintains this level. Table C-1 summarizes actual and estimated ship steaming days per quarter for each of the four fleets.

TABLE C-1

SHIP STEAMING DAYS PER QUARTER

	Actual		Estimated	
Fleet	FY 1983	FY 1984	FY 1985	FY 1986
Non-Deployed				
Second Fleet	28.8	30.7	31.0	31.0
Third Fleet	25.2	25.7	27.0	27.0
Deployed				
Sixth Fleet	59.9	67.4	50.0	50.0
Seventh Fleet	51.0	52.6	51.0	51.0

Flying Hour Program. The flying hours used by the Navy and Marine Corps to reach readiness levels are shown in Tables C-2 and C-3. Table C-2 shows the flying hour program in terms of hours flown by aircraft in the active inventory. Flying hours projected for FY 1985 and 1986 reflect continued efforts to attain a high state of readiness.

TABLE C-2

NAVY/MARINE CORPS FLYING HOURS BY TYPE OF AIRCRAFT

Type Aircraft	Actual FY 1983	Actual FY 1984	Estimated FY 1985	Estimated FY 1986
Active Navy				
A-6	46,206	44,006	42,996	41,038
KA-6	17,371	15,375	14,862	16,370
A-7	108,752	97,486	107,028	95,732
F-4	16,250	6,302	11,802	6,843
F-14	77,197	84,275	83,215	86,473
E-2	27,343	29,887	33,261	30,518
SH-3	35,884	37,760	40,478	44,946
SH-2	33,221	36,180	34,915	36,370
S-3	46,703	48,886	40,620	46,957
P-3	154,659	162,948	157,144	159,340
EA-6	15,805	17,481	17,380	17,120
F/A-18	126	11,184	18,645	36,300
SH-60	--	--	8,018	20,004
(Total TACAIR)	(579,517)	(591,770)	(610,364)	(638,011)
All Other	874,664	856,679	865,088	933,845
Grand Total, Active USN	1,454,181	1,447,849	1,475,452	1,571,856
Active Marine Corps				
AV-8	11,501	12,802	12,225	15,740
A-4	22,198	23,087	23,059	24,094
A-6	18,312	20,227	20,113	18,448
F-4	34,371	32,436	31,359	26,160
UH-1	20,490	22,179	21,146	20,932
AH-1	15,672	19,979	20,211	22,902
CH-46	51,357	56,728	52,700	59,424
CH-53	35,939	36,858	41,384	43,086
OV-10	10,355	11,363	10,735	12,075
KC-130	22,206	23,227	27,032	28,040
EA-6	4,616	5,104	5,038	5,785
RF-4	6,105	6,557	7,027	6,939
F/A-18	5,022	14,762	16,127	23,220
(Total TACAIR)	(258,144)	(285,309)	(288,156)	(306,845)
All Other	76,385	139,417	87,844	92,173
Grand Total, Active USMC	334,529	424,726	376,000	399,017
Total Reserves, USN/USMC	221,429	225,677	229,014	242,525

Table C-3 shows the flying hour program by hours per crew per month. Navy and Marine Corps tactical air/antisubmarine warfare crews will average 25 hours per month in FY 1986, slightly more than the projected FY 1985 figure of 24 hours.

TABLE C-3

NAVY/MARINE CORPS FLYING HOURS PER CREW PER MONTH

Type Aircraft	Actual		Estimated	
	FY 1983	FY 1984	FY 1985	FY 1986
Navy				
A-6	27	25	22	21
KA-6	25	23	21	22
A-7	22	21	23	22
F-4	18	18	20	19
F-14	22	22	21	22
E-2	35	38	37	34
SH-3	26	27	26	28
SH-2	20	22	21	22
S-3	22	23	24	27
P-3	41	43	40	41
EA-6	24	26	24	23
F/A-18	0	19	23	24
SH-60	0	0	23	29
Marine Corps				
AV-8	15	17	16	17
A-4	15	17	17	18
A-6	23	25	25	22
F-4	16	19	19	19
UH-1	27	29	28	27
AH-1	16	21	21	23
CH-46	21	23	21	24
CH-53	21	21	22	22
OV-10	18	19	18	21
KC-130	28	29	34	34
EA-6	18	20	20	21
RF-4	16	18	19	19
F/A-18	16	24	23	23

Joint/Combined and Fleet Exercises. Military forces must exercise the way they plan to fight, and the Navy is making progress toward this goal. Numerous joint, combined, and Navy-only exercises are held annually, with a resultant improvement in the quality of training and overall readiness. Recent joint efforts by the Navy and Air Force have resulted in an enhancement of the total force capability to conduct maritime operations. In particular, these joint exercises have identified problem areas in interoperability; solving these problems will help to improve performance in future exercises and the joint ability to meet the threat at sea. Some examples of the exercises include:

- TEAM SPIRIT: An annual large-scale air, sea, land joint/combined exercise for Pacific units.

- o OCEAN VENTURE: A joint/combined sea, air, land exercise for Atlantic units.
- o TEAMWORK: A large-scale maritime superiority exercise including NATO air and sea forces.
- o DISPLAY DETERMINATION: A large-scale sea, air, land exercise for Mediterranean forces.

Training Improvements. The Navy has made considerable progress in the use of simulators of various types to improve collective unit training. Wargaming simulators are being used increasingly to enhance the tactical abilities of commanders. The aviation community continues to make good use of flight simulators.

The Navy aviation simulator program is geared to complement aircraft flight training. The emphasis is on crew training that can be performed best by the use of simulators. Simulator improvements will be achieved for the F/A-18 and SH-60B in FY 1986. Although there have been improvements, continued support is essential to ensure that a cost-effective balance is achieved between day-to-day flying and simulation training. The following table (C-4) outlines major aviation simulators currently in use.

TABLE C-4

MAJOR NAVY AVIATION SIMULATORS IN USE

Weapons System	Operational Flight Trainer				Weapons System Trainer			
	FY80	FY84	FY85	FY86	FY80	FY84	FY85	FY86
A-4M	2	2	2	2	0	0	0	0
A-6E	0	1	1	1	2	2	2	2
EA-6A/B	0	0	0	0	2	2	2	2
A-7B/E	0	0	0	0	6	6	6	6
AV-8A/B	1	1	2	2	0	0	0	0
CH-46D/E	1	3	3	3	0	0	0	0
CH-53/D/E	0	3	3	3	0	0	0	0
E-2C	0	2	2	2	0	0	0	0
F-4N/J/S	2	2	2	2	4	5	5	5
RF-8G	0	0	0	0	1	1	1	1
F-14A	4	4	4	4	0	0	0	0
F-18	0	1	3	5	0	0	0	0
KC-130	1	1	1	1	0	0	0	0
P-3A/B/C	5	6	7	7	2	3	3	3
S-3A	0	0	0	0	5	5	5	5
SH-2F	0	0	0	0	2	2	2	2
SH-3H	0	0	0	0	2	2	2	2
SH-60B	0	1	2	2	0	0	0	2
TA-4J	9	9	9	9	-	-	-	-
T-2C	7	7	7	7	-	-	-	-
T-44A	0	4	4	4	-	-	-	-
TH-1L	0	1	1	1	-	-	-	-
TOTAL	32	48	53	55	26	28	28	30

In general, the Navy has found that simulators are most effective as a means of complementing and extending conventional training rather than as a replacement for significant parts of it. As an example, pierside trainers are now widely used to exercise combat information center personnel and sonar and radar crewmen in realistic combat exercises while their ships are in port. These simulated exercises add to the learning experience and team proficiency gained in exercises at sea. In addition, the more modern simulators can replicate the full array of possible threats and the combat environment that could be expected in wartime; it is difficult, and in some cases impossible, to achieve an equally realistic combat environment through exercises at sea. Simulators of this type pay off handsomely in terms of advancing ships' crews toward full exploitation of the capabilities of their ships.

Summary. Collective unit training for the Navy has been, and will continue to be, a priority effort. The resources available have generally been adequate to meet, or come close to meeting, peacetime training objectives as well as to support the nation in Grenada, Lebanon and elsewhere. However, any reduction in the flying hour or steaming hour programs below their minimum levels would damage fleet readiness and the Navy's capability to train its units for adequate execution of the nation's maritime strategy.

MARINE CORPS

The following section discusses collective unit training in the Marine Corps, first in terms of trends in statistical indicators, then in terms of progress toward better training.

Battalion Field Training Days. A "field training day," as used in Table D-1, is a day spent in collective unit training, either in the field or off amphibious shipping, in furtherance of the unit mission.

TABLE D-1

MARINE CORPS BATTALION FIELD TRAINING DAYS

Type Unit	Units	Actual		Estimated	
		FY 83	FY 84	FY 85	FY 86
Infantry Battalion	27	2,580	2,906	3,121	3,168
Tank Battalion	3	293	262	326	343
Assault Amphibian Vehicle Battalion	3	210	237	263	335
Artillery Battalion*	12/13	1,316	1,364	1,422	1,597
Engineer Battalion	3	310	212	202	242
Reconnaissance Battalion	3	346	258	259	271
Light Armored Vehicle Battalion**	1/3	--	10	70	150
TOTAL	52/55	5,055	5,249	5,663	6,106

*An additional artillery battalion will be activated in FY 86.

**One LAV battalion will be activated in FY 85; one LAV battalion will be activated in FY 86.

Included within the general growth in Battalion Field Training Days are two significant changes:

- o A shift from predominantly small-unit training to a greater emphasis on training operations at battalion and regimental levels.
- o Longer training deployments away from home bases.

Training Munitions Expended. Figures in Table D-2 show the cost of ammunition expended for training purposes. The figures do not include aviation ordnance procured by the Department of the Navy.

TABLE D-2

MARINE CORPS TRAINING AMMUNITION EXPENDED
($ in Millions)

Actual		Estimated	
FY 1983	FY 1984	FY 1985	FY 1986
105	135	180	206

The increase shown in total training ammunition costs is attributable to the higher costs of new ammunition types being purchased to support new weapon systems. Two examples illustrate this effect.

- o With the replacement of the 105mm howitzer by the new M-198 155mm howitzer, the cost of a round of artillery ammunition is roughly tripled.
- o The LAV-25 light armored vehicle mounts a 25mm automatic cannon. The cost of a single round for this weapon is approximately $38.00.

Although there is no substitute for live-firing exercises, and sufficient quantities of ammunition must continue to be provided for that purpose, simulation devices are being developed which will enhance the skills of riflemen; tank, LAV-25, TOW, DRAGON, and Stinger gunners; and artillery and mortar forward observers. In addition, other devices are being developed which will enhance the skills of commanders and their staffs in tactical decision-making, command and control, and fire support coordination.

Training Exercises. Table D-3 provides an outline of major field training exercises, including those directed and coordinated by the Joint Chiefs of Staff.

TABLE D-3

MAJOR MARINE CORPS FIELD TRAINING EXERCISES*
(Active and Reserve)

Type Exercise	MAU			MAB			MAF			Regiment & Below			Total		
	FY84	85	86	FY84	85	86	FY84	85	86	FY84	85	86	FY84	85	86
CPX				5	5	5	11	7	9	8	4	6	24	16	20
Amphibious	19	23	21	5	8	7	2	3	3	7	1	4	33	35	35
Desert										3		2	3		2
Jungle										4	3	3	4	3	3
Cold Weather				1	2	1				3	5	3	4	7	4
Avn Ops										47	36	41	47	36	41
Mountain										5	9	8	5	9	8
Logistical										3	1	2	3	1	2
Fire Ex										9		5	9		5
Field Trng (includes CAX)		5		4	6	4	1		1	29	29	28	34	40	33
Strat Mob Ex				2	2	2							2	2	2
JA/ATT	1		1							3	4	3	4	4	4
Other					1					1	1	1	1	2	1
TOTAL	20	28	22	17	24	19	14	10	13	122	93	106	173	155	160

* Definitions:
MAU: Marine Amphibious Unit
MAB: Marine Amphibious Brigade
MAF: Marine Amphibious Force

Since FY 1980, the number of MAU- and MAB-sized exercises has increased significantly. In association with a general increase in the size of exercises, this has meant that more Marines received mission-oriented training on a more frequent basis.

Valid standards of training achievement serve as the basis for training conducted in the regular and reserve components of the Fleet Marine Forces. In FY 1984 collective training standards were published for the Marine Air Command and Control System, infantry units, and special operations, such as Military Operations in Urban Terrain (MOUT), amphibious raids, and cold-weather operations. The development of new individual training standards was initiated for aviation supply, terrorism counter-action, and helo/fixed wing operations.

Objective training standards merely define the desired outcome of a unit commander's training program. Commanders must have the opportunity and resources to practice, demonstrate proficiency, and correct performance deficiencies when identified. In this regard:

- Battalion training days increase from 4,876 in FY 1982 to a projected level of 5,663 for FY 1985.

- Ten combined-arms exercises (CAXs) are conducted each year at Twentynine Palms, eight for the regular forces and two for the reserve forces. The CAXs, which are run in the desert, provide the challenge and maneuver space to permit the integration of live ordnance delivery with unit maneuver.

- The Marine Corps Mountain Warfare Training Center (MCMWTC) provides the mountainous terrain and cold-weather environment necessary to train for the Marine Corps' strategic roles in Northern Europe and certain Western Pacific regions. Approximately 12,000 Marines, including ten battalion-sized units, of which one or more battalions are usually provided by the Marine Corps Reserve, are trained each year at the MCMWTC.

- Training with counterparts of allied forces around the world is continuing.

- Aviation units participate in a wide spectrum of combat training programs, to include the Air Force's Electronic Warfare/Close Air Support Test Program and RED FLAG exercises. Such exercises provide Marine air crews invaluable training and insight into today's high-tech threat environment. Procedures and equipment are tested in an electronic warfare environment. Participation in these exercises normally range from squadron detachments to a composite air group.

- The Marine Aviation Weapons and Tactics Squadron-One (MAWTS-1) at Yuma, Arizona provides standardized advanced training in all aspects of the employment of Marine aviation. MAWTS-1 conducts semi-annual weapons and tactics instructor courses which provide extensive training for 140 aircrews and aviation command and control officers each year. These officers return to their units

and establish a cadre of expertise for unit training programs. In addition, MAWTS-1 provides training for over 3,000 wing personnel in supplemental courses each year.

- Annual Marine Corps-wide competitions among rifle squads, advanced tactical training for aircrews, and frequent collective performance testing of battalions and squadrons provide the appropriate link between entry-level training for individuals and the desired operational readiness of Marine air-ground task forces.

Training Management. Several initiatives have been accomplished in the area of management of unit training. A Unit Training Management Guide was published that gives specifics of the training process and provides information for the unit commander and his staff responsible for planning and conducting training at the battalion or squadron level.

A Special Programs Department was established at the Marine Corps Institute to develop standardized training packages for units. The training packages are for use by unit commanders to conduct specialized skill training for individual Marines. An Aviation Training Readiness Information Management System (ATRIMS) for operational and training squadrons has been established. ATRIMS software is designed to transfer the squadron aircrew manual training management workload to existing unit hardware and programming resources. Only increased consumable costs are anticipated.

Simulators and Simulation. The Marine Corps is taking full advantge of new technology to modernize training programs and methods. In this regard, some specific improvements include:

- Flight simulators: F/A-18, AV-8B, AH-1 (TOW), and CH-53E.
- Ammunition simulation: Multiple Integrated Laser System (MILES), Precision Gunnery Trainer, Training Set Fire Observer, Launch Environment Trainer, and the Simulated Laser Target.
- Equipment simulation: LVT driver trainer, LAV turret trainer, and medium girder bridge model.
- Tactical decision-making simulation: Tactical Warfare Simulation Evaluation and Analysis System, manual war games, and the Combined Arms Staff Trainer.
- Maintenance training simulators for tracked and wheeled vehicles: LVT, HMMWV, CUCV, and LVS.

Training Range Development. The adequacy of ranges continues to receive high priority within the Marine Corps. We have presently scheduled for construction during FY 1986-87 Multi-Purpose Range Complexes (MPRC) at Camp Pendleton and the Marine Corps Air Ground Combat Center. The MPRC will provide the Marine Corps the ability to exercise precision gunnery training for a variety of weapon systems including tanks, fighting vehicles, LVTs, anti-armor weapons and attack helicopters. Multiple levels of training from crew training up to combined arms can be accomplished. Evaluation of training will be provided by means of targets equipped with round-counting and hit-sensing devices. In addition, we are continuing to seek answers to unique problems associated with the environmental issues present at Camp Lejeune. With the installation of the Land Use Management System (LUMS) at Camp Lejeune, solutions to range development coupled with environmental concerns can be addressed and alternatives considered.

The objective of all Marine Corps initiatives cited in this report is the overall combat readiness of the fleet Marine forces. To this end, the Marine Corps Combat Readiness Evaluation System (MCCRES) provides force commanders with the diagnostic training evaluation system which measures unit capability to meet operational missions. MCCRES provides standardized evaluation policies and procedures and a comprehensive listing of standards for mission performance. MCCRES evaluations are reviewed at the unit level to identify training deficiencies and implement corrective measures. MCCRES data are further analyzed at the Headquarters Marine Corps level in order to identify Marine Corps-wide training trends.

AIR FORCE

The following paragraphs discuss progress in collective unit training in the Air Force.

Aircrew Training. Air Force aircrew training continued to improve during FY 1984. Over 90 percent of the total flying force was either fully or substantially combat ready in unit training. Aircrew training was enhanced by increased flying hours and realistic exercises for combat-like training. Even with the demands of aggressive training, tough exercises, and frequent deployments, 1984 was the Air Force's second safest year on record with under 1.8 major accidents per 100,000 flying hours. The tactical fighter force improved its safety record for the fifth straight year.

Tables E-1, E-2, and E-3 display total flying hours by aircraft type for the active Air Force, Air Force Reserve, and Air National Guard, respectively. Projected increases in FY 1985 and FY 1986 reflect continued effort in maintaining a high state of readiness.

TABLE E-1

ACTIVE AIR FORCE FLYING HOURS BY AIRCRAFT

	Actual		Estimated	
Aircraft	FY 1983	FY 1984	FY 1985	FY 1986
A-7	5,962	6,493	4,533	4,536
A-10	178,158	174,742	170,936	172,380
A/OA-37	14,134	16,963	13,837	13,787
B-52	106,822	103,659	103,436	103,206
C-5	38,466	40,079	38,342	35,952
C-9	29,176	29,470	30,006	29,490
C-130 (all)	226,472	224,237	223,741	224,549
C-135 (ex. KC-)	57,081	58,804	61,762	64,971
C-141	239,468	228,099	225,626	227,979
E-3	29,205	30,186	30,396	31,260
E-4	1,508	1,396	1,677	1,954
EF-111	3,050	6,014	9,817	11,388
F-4	177,783	163,287	158,327	142,009
F-15	163,939	175,341	180,338	195,888
F-16	137,671	186,128	197,498	236,736
F-106	29,848	20.078	11,207	5,618
F-111	75,517	72,948	71,811	70,986
FB-111	17,863	19,144	20,368	20,727
H-1	46,118	45,300	45,835	44,431
H-3	20,149	20,165	21,857	21,035
H-53	13,699	13,880	14,584	14,089

continued

TABLE E-1 (continued)

Aircraft	Actual FY 1983	Actual FY 1984	Estimated FY 1985	Estimated FY 1986
H-60	2,303	4,092	4,080	3,891
KC-10	11,705	10,561	12,381	13,838
KC-135	151,529	151,964	150,044	156,852
O-2	27,902	24,660	25,171	28,811
OV-10	28,764	24,257	26,456	31,368
RF-4	48,193	49,211	49,280	48,731
T-37	329,022	319,596	318,218	326,600
T-38	367,004	378,643	368,911	367,783
T-39/C-12/C-21	76,124	85,656	87,709	85,984
TR-1	1,509	4,073	7,735	11,246
Other	119,494	116,182	150,828	169,378
TOTAL	2,775,638	2,805,308	2,836,787	2,917,453

TABLE E-2

AIR FORCE RESERVE FLYING HOURS BY AIRCRAFT

Aircraft	Actual FY 1983	Actual FY 1984	Estimated FY 1985	Estimated FY 1986
A-10	20,020	21,486	20,232	21,728
C-5	15,883*	19,401*	19,000*	19,000*
			219**	2,503**
C-130 (all)	62,790	66,506	68,280	68,583
C-141	51,520*	63,850*	64,000*	64,000*
				300***
F-4	20,823	21,546	21,615	21,765
F-16	0	2,943	5,220	5,220
H-1	2,207	2,393	2,295	2,295
H-3	5,650	5,777	3,375	3,375
KC-10	4,286	7,205	9,706	13,173
KC-135	9,073	9,102	9,000	9,000
UC-123	737	737	638	638
TOTAL	192,989	220,945	223,580	231,580

*Associate units without assigned aircraft; flying hours were included in Active Force figures in last year's report.

**C-5 unit equipment begins in 1985.

***C-141 unit equipment begins in 1986.

TABLE E-3

AIR NATIONAL GUARD FLYING HOURS BY AIRCRAFT

Aircraft	Actual		Estimated	
	FY 1983	FY 1984	FY 1985	FY 1986
A-7	79,274	77,915	74,268	74,268
A-10	28,980	28,874	28,368	28,508
C-5	0	0	271	2,366
C-12	0	0	0	2,656
C-21	0	0	0	2,640
C-130 (all)	84,856	82,300	84,276	85,483
C-131	11,251	10,393	10,000	7,899
F-4	71,578	87,472	97,119	95,049
F-15	0	0	0	2,867
F-16	278	4,794	4,607	5,961
F-105	1,616	0	0	0
F-106	25,641	20,331	20,342	21,222
H-3	426	449	3,060	3,059
KC-135	40,988	40,820	40,872	40,872
O-2	4,688	2,697	102	0
OA-37	13,499	13,548	14,028	15,654
RF-4	31,340	28,221	27,174	28,469
T-33	10,447	9,071	10,488	11,316
Other	9,650	9,882	9,757	7,729
TOTAL	414,512	416,767	425,032	436,018

Tables E-4, E-5, and E-6 display flying hours per crew per month for selected high-density aircraft for the active Air Force, Air Force Reserve, and Air National Guard.

TABLE E-4

ACTIVE AIR FORCE FLYING HOURS PER CREW PER MONTH

Aircraft	Tng/Ops Goal	Actual		Estimated	
		FY 83	FY 84	FY 85	FY 86
A-10	24.3	24.5	22.8	22.8	23.0
B-52	27.0	18.3	20.3	20.7	20.6
C-5	15.9	16.7	14.9	14.8	14.9
C-130	29.7	30.1	28.5	28.1	28.4
C-141	39.9	35.7	33.9	33.9	34.0
F-4	18.6	16.0	16.7	16.7	16.6
F-15	21.1	18.2	18.7	19.0	19.2
F-16	21.7	18.6	18.2	18.7	19.1
F-111	20.2	17.9	17.5	18.0	18.1
FB-111	20.9	13.2	14.8	16.4	16.5
KC-135	20.3	18.1	17.4	17.3	18.7

TABLE E-5

AIR FORCE RESERVE FLYING HOURS PER CREW PER MONTH

Aircraft	Tng/Ops Goal	Actual FY 83	Actual FY 84	Estimated FY 85	Estimated FY 86
A-10	12.3	12.9	13.6	12.3	12.3
C-5	13.5*	13.5	13.1	13.5*	13.5*
	8.8**			8.8**	8.8**
C-130	14.2	13.8	14.7	14.2	14.2
C-141	13.5*	12.9	13.4	13.5	13.5*
	10.0**				10.0**
F-4	11.3	11.3	11.8	11.3	11.3
F-16	11.3	0	11.7	11.3	11.3
KC-135	15.6	15.4	16.5	15.6	15.6

*Associate unit without aircraft
**Unit equipped with aircraft

TABLE E-6

AIR NATIONAL GUARD FLYING HOURS PER CREW PER MONTH

Aircraft	Tng/Ops Goal	Actual FY 83	Actual FY 84	Estimated FY 85	Estimated FY 86
A-7	10.4	9.5	9.5	9.5	9.5
A-10	11.4	11.1	11.1	11.1	11.1
C-130	7.8	7.6	7.6	7.6	7.6
F-4	8.9	8.3	8.3	8.3	8.3
F-16	10.3	9.2	9.2	9.2	9.2
F-106	11.7	11.7	11.7	11.7	11.7
KC-135	7.3	7.3	7.3	7.3	7.3
OA-37	8.8	8.4	8.4	8.4	8.4
RF-4	9.6	9.3	9.3	9.3	9.3

Although the Air Force is meeting its peacetime training objectives, any cuts to the flying hour program would adversely impact on combat readiness. In the near term, there will be a growth in the requirement for mission training related to new weapon systems (F-15, F-16, KC-10) and sophisticated munitions (air launched cruise missiles, precision-guided missiles) as these systems come on line. As the threat becomes more sophisticated, the amount of training required to meet and defeat that threat will increase.

Training Munitions. Table E-7 shows trends in procurement of training munitions for the Air Force. Munitions for training are bought as they are needed. In some cases, it is more economical to buy several years' expenditures in one year rather than year by year. This procurement cycle will make the total dollars fluctuate from year to year.

TABLE E-7

AIR FORCE TRAINING MUNITIONS PROCUREMENT
($ in Millions)

	Actual		Estimated	
	FY 83	FY 84	FY 85	FY 86
General Training Munitions*	216.1	281.0	319.2	316.3
Training Missiles**	98.9	93.8	96.1	93.8
TOTAL	308.7	365.7	415.6	427.7

*FY 83 figure reported in this report for FY 1985 included aircrew training munitions only; the above FY 83 figure includes munitions for ground training.

**Expenditures are used primarily for weapon system evaluations; aircrew training is a secondary benefit.

Exercise Participation. Air Force units participate in numerous exercises, all of which are tailored to provide realistic training and demonstrate weapon system capability. All forces are improving their combat capabilities through participation in "FLAG" exercises. These provide excellent aircrew training in an interactive environment with each Air Force major command, other Military Services, and forces from foreign nations. These exercises include:

- RED FLAG: Based on extensive range complex at Nellis AFB, Nevada. Provides intensive combat crew training for tactical units and aircrews, fused together under a central manager, in a realistic combat environment.
- GREEN FLAG: Integrates maximum feasible amount of electronic combat training into specified RED FLAG and other exercises.
- COPPER FLAG: Air defense exercises.
- MAPLE FLAG: Conducted in Canada with Canadian air units. Provides realistic tactical training over terrain similar to that in Europe.
- BLUE FLAG: Non-flying training for battle managers in various wartime tactical scenarios.
- CHECKERED FLAG: Provides active duty and reserve force aircrews training in overseas locations.

Air Force participation in "FLAG" and JCS exercises in FY 1984 is displayed by major weapon system category in Tables E-8 and E-9. Participation rates in FY 1985 and FY 1986 are expected to be roughly the same.

TABLE E-8

AIR FORCE PARTICIPATION IN "FLAG" EXERCISES

	Sorties	Flying Hours
Tactical Air Forces		
RED/GREEN/MAPLE/COPPER FLAGs	22,187	37,717
Strategic Bomber/Tanker Forces		
RED/GREEN/MAPLE FLAGs	742	4,003
Strategic/Tactical Airlift Forces		
RED FLAG	527	1,254

Air National Guard and Air Force Reserve units regularly participate in each type of FLAG exercise.

TABLE E-9

AIR FORCE PARTICIPATION IN JCS EXERCISE PROGRAM

	Sorties	Flying Hours
Tactical Air Forces	17,409	29,224
Strategic Bomber/Tanker Forces*	650	7,400
Strategic/Tactical Airlift Forces**	N/A	53,417

*Data are for bombers only, since recovery of tanker information specific to JCS exercise participation is not available.

**Numbers of sorties are not part of the airlift data base, since airlift operations are defined in terms of missions which may involve several individual sorties.

These data represent Air Force unit participation of some magnitude in 22 JCS-directed and 49 JCS-coordinated exercises in FY 1984. The Air Force plans to participate to approximately that same extent in FY 1985 and FY 1986.

Training Improvements and Trends. Air Force training is benefiting from added emphasis and support for flying hours, realistic flying training, joint exercises, and improved simulators.

The FY 1986 flying hour program for all active and reserve forces represents a three percent growth over FY 1985. This growth supports realistic training programs that enhance combat readiness and increase the flying hours per month per aircrew for most weapon systems.

Realism in training contributes directly to increased combat readiness. Ongoing training exercises, such as RED FLAG, train Air Force flight crews under conditions that approximate the combat environment. The expected payoff will be the ability to attack and destroy enemy resources successfully and also to reduce attrition through this "combat environment experience." Another facet of realistic training involves deploying active and Air Reserve Force fighter units to European bases of operation. At the forward locations, aircrews become more familiar with overseas mission employment and areas of operation; this experience improves their combat effectiveness and survivability.

Joint exercises provide another valuable training experience for Air Force units through the use of command and control systems and procedures that will be used during actual combat employment. Improvements in preparing to fight the joint Army/Air Force Air Land Battle are evidenced by the expansion of the Warrior Preparation Center in U.S. Air Forces Europe and the Air Warrior Operations Center at George AFB, CA. The overall trend in Air Force training continues to be toward "training as you fight." Realistic scenarios that accurately portray the expected threat are extensively used. These training opportunities are an essential part of the total force application of air power in its global role.

The goal of the Air Force simulator program is to complement the total aircrew flying training program. The emphasis of the program is on crew training requirements that can best be performed through the use of simulators. Simulator improvements have been achieved for the B-52, C-130, A-10, and F-16 aircraft. The FY 1986 budget request will support prototype simulator production for the B-1B, T-46, and EF-111A. An air refueling part-task trainer for the C-5 and C-141, and a simulator for air-to-air combat for the F-15/16, are also in the budget request. The Air Force continues to adapt commercial training programs to military use where this is feasible. Commercially developed programs are currently used for the KC-10 and E-3A, are planned for the C-5 in FY 1987, and are being considered for the C-17 in the future.

Training improvements are occurring across the board as a result of congressional budget support. However, while the aircrew simulator program has experienced successes, the need will continue to exist for simulators with the proper levels of fidelity, sophistication, currency, and availability to complement the flying training program. Continued support for Air Force simulator programs is essential to ensure that aircrews have devices which will allow them to learn and practice safety-of-flight tasks,

or tasks which because of airspace or range limitations cannot be practiced effectively in the aircraft. Implementation of these concepts provides a cost-effective training strategy for the improvement of combat readiness.

Table E-10 shows a selection of weapon systems which are supported by higher-order simulators, such as weapon system trainers and operational flight trainers. Each of the systems shown has a supporting family of less sophisticated trainers which may include: procedure trainers, part-task trainers, familiarization trainers, computer-based instruction, and maintenance mock-ups. The figures include devices owned by the Air National Guard and the Reserve Forces.

An operational flight trainer (OFT) is a device which dynamically simulates the flight characteristics of the designated aircraft to train flight crews in cockpit procedures, instrument flight procedures, emergency procedures, communications and navigation procedures, and limited mission execution. This trainer combines safety-of-flight and operational tasks (example: F-4E OFT).

A weapon system trainer (WST) is a device which provides a synthetic flight and tactics environment in which aircrews learn, develop, and improve the techniques associated with their respective crew positions in a specific aircraft. Crew members operate individually or as a team in the execution of operational missions (example: B-52 WST).

TABLE E-10

AIR FORCE TRAINERS

Weapons System	Operational Flight Trainer				Weapons System Trainer			
	FY 83	FY 84	FY 85	FY 86	FY 83	FY 84	FY 85	FY 86
Active								
A-10	7	7	7	7	0	0	0	0
B-52G	0	0	0	0	1	4	6	6
B-52H	0	0	0	0	0	3	3	3
C-5	0	0	0	0	5	5	5	5
C-130	9	9	7	7	1	1	3	3
C-141	7	8	8	8	0	0	0	0
CH-3E	1	1	1	1	0	0	0	0
E-3A	1	1	1	1	0	0	0	0
EF-111A	0	0	0	0	0	0	0	1
F-4E	11	11	11	9	0	0	0	0
F-4G	0	0	0	0	2	3	4	4
F-15	8	9	10	12	0	0	0	0
F-16	8	8	8	9	0	0	0	0
F-111A/D/E/F	7	7	7	7	0	0	0	0
FB-111A	3	3	3	3	0	0	0	0
HH-53C	1	1	1	1	0	0	0	0
KC-10	0	0	0	0	1	1	2	2
KC-135	0	0	0	0	1	1	1	1
KC-135R	0	0	1	1	0	0	0	0
RF-4C	7	7	7	7	0	0	0	0
SR-71	1	1	1	1	0	0	0	0
T-37	11	11	11	11	0	0	0	0
T-38	11	11	11	11	0	0	0	0
WC/C-135	1	1	1	1	0	0	0	0
SUBTOTAL	94	96	96	97	11	18	24	25
ANG								
A-7	5	5	5	5	0	0	0	0
A-10	3	3	3	3	0	0	0	0
F-4C	5	5	5	5	0	0	0	0
F-4D	9	9	9	8	0	0	0	0
F-4E	0	0	0	2	0	0	0	0
F-16	0	0	0	3	0	0	0	0
SUBTOTAL	22	22	22	26	0	0	0	0
AFRES								
A-10	4	4	4	4	0	0	0	0
F-4D	2	2	2	3	0	0	0	0
SUBTOTAL	6	6	6	7	0	0	0	0
TOTAL	122	124	124	130	11	18	24	25

JCS DIRECTED AND COORDINATED EXERCISES

Realistic and challenging training is essential to the development and maintenance of collective unit capabilities within each Service. Collective unit training is a principal peacetime occupation in each Service. Training at home stations is augmented, when possible, by further training at facilities such as the Army's National Training Center, the Marine Corps' Air-Ground Combat Center, and the Air Force's Nellis range complex. These facilities provide environments where units experience the stress and test of rigorous wartime conditions against actual adversaries. Data gathered at these and similar facilities allow the Services to improve doctrine, combat tactics, training methods, and unit operating procedures. Service-sponsored exercises frequently include participation by units of other Services.

As an important extension of Service training, the JCS-directed and coordinated exercise program provides opportunities to use and evaluate joint doctrine, tactics, techniques, procedures, and command and control in a realistic environment. These exercises are essential to the readiness of U.S. forces supporting the missions of the unified and specified commanders. The trend in the number and cost of these exercises is shown in Table F-1.

TABLE F-1

JCS DIRECTED AND COORDINATED EXERCISE PROGRAM

	Actual		Estimated	
	FY 1983	FY 1984	FY 1985	FY 1986
Number of Exercises	57	71	80	78
Funding ($ Millions)*	244.4	257.6	315.6	275.6

*Excludes funding for participating units of the Services, which are funded from Service accounts.

This program of approximately 80 directed and coordinated exercises per year is designed to deploy forces to the Far East, Europe, Latin America, and the Middle East; operate in desert and other extreme environments; exercise command and control of multi-Service task forces; and link reinforcing units with deployed or pre-positioned equipment. Another very important readiness benefit is derived from the realistic training these exercises provide to support units and functions during the deployment, employment and redeployment phases. This training improves the performance of operational units, sealift and airlift organizations, logistics networks, lines of communication, medical support, and supply functions of all types. Finally, these exercises are used to evaluate U.S. strategic plans and show U.S. presence throughout the world.

In recent years, the world situation has increasingly required the demonstration of U.S. resolve and capability to project U.S. military presence in support of national interest and commitments. Combined exercises with allies provide the necessary interaction to test and evaluate combined systems, lines of communication, and agreements. The U.S. BRIGHT STAR series of exercises demonstrates U.S. determination to project military forces into the Middle East to defend interests in that region. Similarly, intensified joint and combined exercises are conducted in the Central American-Caribbean region. The annual REFORGER exercise ("return of forces to Germany") and TEAM SPIRIT in Korea continue to demonstrate resolve and support for U.S. allies in those regions. During FY 1986, joint and combined training exercises will continue to play a vital role in sharpening the readiness posture of U.S. forces and that of its allies.

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